GenCore version 4.5

OM nucleic - nucleic search, using sw model

Run on: September 7, 2001, 13:55:08 ; Search time 65.24 Seconds
(without alignments)
3456.002 Million cell updates/sec

Title: US-08-900-220C-8
Perfect score: 1191
Sequence: 1 ATGGCTCTCCTGACCAATCT.....CGGAGGAGCTACTGGGCTGA 1191

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 324599 seqs, 94655562 residues

Total number of hits satisfying chosen parameters: 649198

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
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5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfiles1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	967.6	81.2	1190	1	US-08-176-427B-3	Sequence 3, Appli
2	967.6	81.2	1190	2	US-08-356-060A-2	Sequence 2, Appli
3	967.6	81.2	1190	4	US-08-460-900C-2	Sequence 2, Appli
4	427.8	35.9	1281	4	US-08-460-900C-3	Sequence 3, Appli
5	419.8	35.2	1313	1	US-08-176-427B-7	Sequence 7, Appli
6	419.8	35.2	1313	2	US-08-356-060A-4	Sequence 4, Appli
7	419.8	35.2	1313	4	US-08-460-900C-4	Sequence 4, Appli
8	407	34.2	1715	4	US-08-757-230A-1	Sequence 1, Appli
9	407	34.2	1715	5	PCT-US95-02315-1	Sequence 1, Appli
10	390.6	32.8	1425	2	US-08-356-060A-6	Sequence 6, Appli
11	390.6	32.8	1425	4	US-08-460-900C-6	Sequence 6, Appli
12	389	32.7	1576	1	US-08-748-591-5	Sequence 5, Appli
13	389	32.7	1576	1	US-08-748-591-10	Sequence 10, Appl
14	381.4	32.0	1277	1	US-08-176-427B-1	Sequence 1, Appli
15	381.4	32.0	1277	2	US-08-356-060A-1	Sequence 1, Appli
16	381.4	32.0	1277	4	US-08-460-900C-1	Sequence 1, Appli
17	355.8	29.9	1056	1	US-08-176-427B-5	Sequence 5, Appli
18	355.8	29.9	1056	2	US-08-356-060A-3	Sequence 3, Appli
19	335.6	28.2	939	2	US-08-356-060A-7	Sequence 7, Appli
20	335.6	28.2	939	4	US-08-460-900C-7	Sequence 7, Appli
21	316.2	26.5	1256	1	US-08-176-427B-9	Sequence 9, Appli
22	316.2	26.5	1256	2	US-08-356-060A-5	Sequence 5, Appli
23	316.2	26.5	1256	4	US-08-460-900C-5	Sequence 5, Appli
24	101.4	8.5	144	3	US-08-946-329A-2	Sequence 2, Appli
25	101.4	8.5	144	3	US-08-567-357A-2	Sequence 2, Appli
26	101.4	8.5	144	4	US-08-729-743A-2	Sequence 2, Appli
27	101.4	8.5	144	5	PCT-US95-15463-2	Sequence 2, Appli
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35	44.4	3.7	3292	3	US-09-320-878-22	Sequence 22, Appl
c 36	43	3.6	1686	2	US-08-648-657-14	Sequence 14, Appl
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c 38	43	3.6	2504	1	US-08-254-359A-3	Sequence 3, Appli
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c 40	43	3.6	2504	1	US-08-481-238-3	Sequence 3, Appli
c 41	43	3.6	2504	2	US-08-471-066B-3	Sequence 3, Appli
c 42	43	3.6	2504	2	US-08-484-956-3	Sequence 3, Appli
c 43	43	3.6	2504	2	US-08-757-653-3	Sequence 3, Appli
c 44	43	3.6	2504	2	US-08-599-491-3	Sequence 3, Appli
c 45	43	3.6	2504	2	US-08-756-386-3	Sequence 3, Appli

ALIGNMENTS

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RESULT   1
US-08-176-427B-3
; Sequence 3, Application US/08176427B
; Patent No. 5789543
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/176,427B
;      FILING DATE:  30-DEC-1993
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1190 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1191
US-08-176-427B-3


  Query Match             81.2%;  Score 967.6;  DB 1;  Length 1190;
  Best Local Similarity   88.3%;  Pred. No. 1.4e-193;
  Matches 1051;  Conservative    0;  Mismatches  139;  Indels    0;  Gaps    0;
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Db   1081 CGGCTGCTGCACGCGCTCGGGGCTCTGCTCCCTGGGGGTGCAGTCCAGCCGACTGGCATG 1140

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RESULT   2
US-08-356-060A-2
; Sequence 2, Application US/08356060A
; Patent No. 5844079
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  47
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/356,060A
;      FILING DATE:  14-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1190 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1191
US-08-356-060A-2


  Query Match            81.2%;  Score 967.6;  DB 2;  Length 1190;
  Best Local Similarity  88.3%;  Pred. No. 1.4e-193;
  Matches 1051;  Conservative    0;  Mismatches  139;  Indels    0;  Gaps    0;

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Db   1141 CATTGGTACTCTCGCCTCCTTTACCGCTTGGCCGAGGAGTTAATGGGCTG 1190
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RESULT 3
US-08-460-900C-2

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; Sequence 2, Application US/08460900C
; Patent No. 6165747
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    APPLICANT:  Bumcrot, David A.
;    APPLICANT:  Marti-Gorostiza, Elisa
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  62
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  FOLEY, HOAG & ELIOT LLP
;      STREET:  One Post Office Square
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/460,900C
;      FILING DATE:  5-JUNE-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/435,093
;      FILING DATE:  4-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/356,060
;      FILING DATE:  14-DEC-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMV-006.05
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 832-1000
;      TELEFAX:  (617) 832-7000
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1190 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1188
US-08-460-900C-2


  Query Match             81.2%;  Score 967.6;  DB 4;  Length 1190;
  Best Local Similarity   88.3%;  Pred. No. 1.4e-193;
  Matches 1051;  Conservative    0;  Mismatches  139;  Indels    0;  Gaps    0;

Qy       1 ATGGCTCTCCTGACCAATCTACTGCCCTTGTGCTGCTTGGCACTTCTGGCGCTGCCAGCC 60

Db       1 ATGGCTCTGCCGGCCAGTCTGTTGCCCCTGTGCTGCTTGGCACTCTTGGCACTATCTGCC 60

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Db    301 GAGCGTTGCAAAGAGCGGGTGAACGCTCTAGCCATCGCGGTGATGAACATGTGGCCCGGA 360

Qy    361 GTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACGGCCACCACGCTCAGGATTCACTC 420
          || |||||||| |||||||| ||||||||||||||||||||||||| ||||||||||||
Db    361 GTACGCCTACGTGTGACTGAAGGCTGGGACGAGGACGGCCACCACGCACAGGATTCACTC 420

Qy    421 CACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACCGCGACCGCAACAAGTATGGG 480
          |||||||||||||||| |||||||||| |||||||||| ||||| || ||||||||
Db    421 CACTACGAAGGCCGTGCCTTGGACATCACCACGTCTGACCGTGACCGTAATAAGTATGGT 480

Qy    481 TTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACTGGGTCTACTACGAGTCCCGCAAC 540
          ||| |||||||||| || |||||||||| |||||||||||||||||||||||||||||||
Db    481 TTGTTGGCGCGCCTAGCTGTGGAAGCCGGATTCGACTGGGTCTACTACGAGTCCCGCAAC 540

Qy    541 CACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGGCGGTCCGGGCGGGCGGCTGCTTT 600
          ||| ||||||| |||||||||||||||||||||||||||||||| || || |||||||||
Db    541 CACATCCACGTATCGGTCAAAGCTGATAACTCACTGGCGGTCCGAGCCGGAGGCTGCTTT 600

Qy    601 CCGGGAAATGCAACTGTGCGCCTGTGGAGCGGCGAGCGGAAAGGGCTGCGGGAACTGCAC 660
          |||||||||| || |||||| || |||||||||| |||| |||||| ||||||| ||
Db    601 CCGGGAAATGCCACGGTGCGCTTGCGGAGCGGCGAACGGAAGGGGCTGAGGGAACTACAT 660

Qy    661 CGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCCGGGTGGTGCCCACGCCGGTGCTG 720
          || || |||||||| |||| || ||||| | ||||| ||||| |||||||| ||||||
Db    661 CGTGGTGACTGGGTACTGGCCGCTGATGCAGCGGGCCGAGTGGTACCCACGCCAGTGCTG 720

Qy    721 CTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCATTTGTGGCTGTGGAGACCGAGTGG 780
          |||||||||||||||  |||||||||| || || || ||||||||||||||||||| ||
Db    721 CTCTTCCTGGACCGGGATCTGCAGCGCCGCGCCTCGTTCGTGGCTGTGGAGACCGAGCGG 780

Qy    781 CCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGGTGTTTGCCGCTCGAGGGCCGGCG 840
          ||||| |||||||||||||||| |||||||| |||||||| || ||||| ||||| |||
Db    781 CCTCCGCGCAAACTGTTGCTCACACCCTGGCATCTGGTGTTCGCTGCTCGCGGGCCAGCG 840

Qy    841 CCCGCGCCAGGCGACTTTGCACCGGTGTTCGCGCGCCGGCTACGCGCTGGGGACTCGGTG 900
          || || ||||| |||||||||||||||||||||||||  |||| ||||| |||||||||
Db    841 CCTGCTCCAGGTGACTTTGCACCGGTGTTCGCGCGCCGCTTACGTGCTGGCGACTCGGTG 900

Qy    901 CTGGCGCCCGGCGGGGATGCGCTTCGGCCAGCGCGCGTGGCCCGTGTGGCGCGGGAGGAA 960
          ||||| |||||||||| ||||| | ||| |||||||| |||||||||| |||||||
Db    901 CTGGCTCCCGGCGGGGACGCGCTCCAGCCGGCGCGCGTAGCCCGCGTGGCGCGCGAGGAA 960

Qy    961 GCCGTGGGCGTGTTCGCGCCGCTCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTG 1020
          |||||||||||||||| |||||||| |||||||||||||||||| ||||| |||||
Db    961 GCCGTGGGCGTGTTCGCACCGCTCACTGCGCACGGGACGCTGCTGGTCAACGACGTCCTC 1020

Qy   1021 GCCTCTTGCTACGCGGTTCTGGAGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTG 1080
          ||||| |||||||||||||| |||||||||||||||||| |||||||| || ||||| |||
Db   1021 GCCTCCTGCTACGCGGTTCTAGAGAGTCACCAGTGGGCCCACCGCGCCTTCGCCCCTTTG 1080

Qy   1081 AGACTGCTGCACGCGCTAGGGGCGCTGCTCCCCGGCGGGGCCGTCCAGCCGACTGGCATG 1140
           | |||||||||||||| ||||| |||||||| || || || ||||||||||||||||||
Db   1081 CGGCTGCTGCACGCGCTCGGGGCTCTGCTCCCTGGGGGTGCAGTCCAGCCGACTGGCATG 1140

Qy   1141 CATTGGTACTCTCGGCTCCTCTACCGCTTAGCGGAGGAGCTACTGGGCTG 1190
          |||||||||||||| ||||| |||||||| || |||||| || |||||||
Db   1141 CATTGGTACTCTCGCCTCCTTTACCGCTTGGCCGAGGAGTTAATGGGCTG 1190


RESULT   4
US-08-460-900C-3
; Sequence 3, Application US/08460900C
; Patent No. 6165747
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    APPLICANT:  Bumcrot, David A.
;    APPLICANT:  Marti-Gorostiza, Elisa
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  62
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  FOLEY, HOAG & ELIOT LLP
;      STREET:  One Post Office Square
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/460,900C
;      FILING DATE:  5-JUNE-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/435,093
;      FILING DATE:  4-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/356,060
;      FILING DATE:  14-DEC-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMV-006.05
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 832-1000
;      TELEFAX:  (617) 832-7000
;  INFORMATION FOR SEQ ID NO:  3:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1281 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1233
US-08-460-900C-3


  Query Match             35.9%;  Score 427.8;  DB 4;  Length 1281;
  Best Local Similarity   63.5%;  Pred. No. 4.1e-81;
  Matches  670;  Conservative    0;  Mismatches  382;  Indels    3;  Gaps    1;

Qy      38 TGGCACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGGCCGGGGGCCGGTTGGCCGGC 97
           ||   ||||||| || | | || | | |||||||||||||||||| |  ||   |||| |
Db      53 TGCTGCTTCTGGTGCCGGCGGCGCGGGGCTGCGGGCCGGGCCGGGTGGTGGGCAGCCGCC 112

Qy      98 GCCGCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGC 157
           | |     | ||||  |||||||||| ||   ||||||||| ||    |||  |||||
Db     113 GGAGGCCGCCTCGCA---AGCTCGTGCCTCTTGCCTACAAGCAGTTCAGCCCCAACGTGC 169

Qy     158 CAGAGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAGGGTGGCAAGGGGCTCCGAGC 217
           | |||  ||||||||||||||| ||||      || || | | | ||   | |||| ||||
Db     170 CGGAGAAGACCCTGGGCGCCAGCGGGCGCTACGAAGGCAAGATCGCGCGCAGCTCTGAGC 229

Qy     218 GCTTCCGGGACCTCGTGCCCAACTACAACCCCGACATCATCTTCAAGGATGAGGAGAACA 277
           |||||   || |||   |||||||||| |||||||||||||||||||| ||||||||||
Db     230 GCTTCAAAGAGCTCACCCCCAACTACAATCCCGACATCATCTTCAAGGACGAGGAGAACA 289

Qy     278 GTGGAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAGGGTGAACGCTTTGGCCATTG 337
             || |||||||||| |||||| |||| ||||||||  |  ||||| |  |||||||
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Db    290 CGGGTGCCGACCGCCTCATGACCCAGCGCTGCAAGGACCGTCTGAACTCACTGGCCATCT 349

Qy    338 CCGTGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACG 397

Db    350 CTGTCATGAACCAGTGGCCTGGTGTGAAACTGCGGGTGACCGAAGGCCGGGATGAAGATG 409

Qy    398 GCCACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTG 457

Db    410 GCCATCACTCAGAGGAGTCTTTACACTATGAGGGCCGCGCGGTGGATATCACCACCTCAG 469

Qy    458 ACCGCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACT 517

Db    470 ACCGTGACCGAAATAAGTATGGACTGCTGGCGCGCTTAGCAGTGGAGGCCGGCTTCGACT 529

Qy    518 GGGTCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGG 577

Db    530 GGGTGTATTACGAGTCCAAGGCCCACGTGCATTGCTCTGTCAAGTCTGAGCATTCGGCCG 589

Qy    578 CGGTCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGTGCGCCTGTGGAGCGGCGAGC 637

Db    590 CTGCCAAGACAGGTGGCTGCTTTCCTGCCGGAGCCCAGGTGCGCCTAGAGAACGGGGAGC 649

Qy    638 GGAAAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCC 697

Db    650 GTGTGGCCCTGTCAGCTGTAAAGCCAGGAGACCGGGTGCTGGCCATGGGGGAGGATGGGA 709

Qy    698 GGGTGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCAT 757

Db    710 CCCCCACCTTCAGTGATGTGCTTATTTTCCTGGACCGCGAGCCAAACCGGCTGAGAGCTT 769

Qy    758 TTGTGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGG 817

Db    770 TCCAGGTCATCGAGACTCAGGATCCTCCGCGTCGGCTGGCGCTCACGCCTGCCCACCTGC 829

Qy    818 TGTTTGCCGCTCGAGGGCCGGCGCCCGCGCCAGGCGACTTTGCACCGGTGTTCGCGCGCC 877

Db    830 TCTTCATTGCGGACAATCATACAGAACCAGCAGCCCACTTCCGGGCCACATTTGCCAGCC 889

Qy    878 GGCTACGCGCTGGGGACTCGGTGCTGGCGCCCGGCGGGGATGCGCTTCGGCCAGCGCGCG 937

Db    890 ATGTGCAACCAGGCCAATATGTGCTGGTATCAGGGGTACCAGGCCTCCAGCCTGCTCGGG 949

Qy    938 TGGCCCGTGTGGCGCGGGAGGAAGCCGTGGGCGTGTTCGCGCCGCTCACCGCGCACGGGA 997

Db    950 TGGCAGCTGTCTCCACCCACGTGGCCCTTGGGTCCTATGCTCCTCTCACAAGGCATGGGA 1009

Qy    998 CGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGCGGTTCTGGAGAGTCACCAGTGGG 1057

Db   1010 CACTTGTGGTGGAGGATGTGGTGGCCTCCTGCTTTGCAGCTGTGGCTGACCACCATCTGG 1069

Qy   1058 CGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCAC 1092

Db   1070 CTCAGTTGGCCTTCTGGCCCCTGCGACTGTTTCCC 1104


RESULT   5
US-08-176-427B-7
; Sequence 7, Application US/08176427B
; Patent No. 5789543
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/176,427B
;      FILING DATE:  30-DEC-1993
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  7:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1313 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1314
US-08-176-427B-7


  Query Match             35.2%;  Score 419.8;  DB 1;  Length 1313;
  Best Local Similarity   64.5%;  Pred. No. 1.9e-79;
  Matches  701;  Conservative    0;  Mismatches  362;  Indels   24;  Gaps    4;

Qy     41 CACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGGCCGGGGGCCGGTTGGCCGGCGCC 100

Db     47 CGCTGCTGGTGTGCCCCGGGCTGGCCTGTGGGCCCGGCAGGGGGTTTGGAAAGAGGCGGC 106

Qy    101 GCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGCCAG 160

Db    107 AC------CCCAAAAAGCTGACCCCTTTAGCCTACAAGCAGTTTATTCCCAACGTAGCCG 160

Qy    161 AGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAGGGTGGCAAGGGGCTCCGAGCGCT 220

Db    161 AGAAGACCCTAGGGGCCAGCGGCAGATATGAAGGGAAGATCACAAGAAACTCCGAACGAT 220

Qy    221 TCCGGGACCTCGTGCCCAACTACAACCCCGACATCATCTTCAAGGATGAGGAGAACAGTG 280

Db    221 TTAAGGAACTCACCCCCAATTACAACCCCGACATCATATTTAAGGATGAGGAAAACACGG 280

Qy    281 GAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAGGGTGAACGCTTTGGCCATTGCCG 340

Db    281 GAGCAGACCGGCTGATGACTCAGAGGTGCAAAGACAAGTTAAATGCCTTGGCCATCTCTG 340

Qy    341 TGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACGGCC 400

Db    341 TGATGAACCAGTGGCCTGGAGTGAGGCTGCGAGTGACCGAGGGCTGGGATGAGGACGGCC 400

Qy    401 ACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACC 460

Db    401 ATCATTCAGAGGAGTCTCTACACTATGAGGGTCGAGCAGTGGACATCACCACGTCCGACC 460

Qy    461 GCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACTGGG 520

Db    461 GGGACCGCAGCAAGTACGGCATGCTGGCTCGCCTGGCTGTGGAAGCAGGTTTCGACTGGG 520

Qy    521 TCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGGCGG 580

Db    521 TCTACTATGAATCCAAAGCTCACATCCACTGTTCTGTGAAAGCAGAGAACTCCGTGGCGG 580

Qy    581 TCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGTGCGCCTGTGGAGCGGCGAGCGGA 640

Db    581 CCAAATCCGGCGGCTGTTTCCCGGGATCCGCCACCGTGCACCTGGAGCAGGGCGGCACCA 640
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Qy    641 AAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCCGGG 700
          |   | ||  |||  | |  | |||||||| | ||  |||||||| || |     ||||||
Db    641 AGCTGGTGAAGGACTTACGTCCCGGAGACCGCGTGCTGGCGGCTGACGACCAGGGCCGGC 700

Qy    701 TGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCATTTG 760
          || ||  ||       | ||   ||||||||||| |||         |  |       ||
Db    701 TGCTGTACAGCGACTTCCTCACCTTCCTGGACCGCGACGAAGGCGCCAAGAAGGTCTTCT 760

Qy    761 TGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGGTGT 820
            |   | |||||   |  ||| |        ||| ||||||||  ||  |||||||  | |
Db    761 ACGTGATCGAGACGCTGGAGCCGCGCGAGCGCCTGCTGCTCACCGCCGCGCACCTGCTCT 820

Qy    821 TTGCCGCTC-----------GAGGGCCGGCGCCCGCGCCAGGCGACTTTGCACCGGTGT 868
          | |  || |                |||||  |||||| |||| |||   |     |
Db    821 TCGTGGCGCCGCACAACGACTCGGGGCCCACGCCCGGGCCAAGCGCGCTCTTTGCCAGCC 880

Qy    869 TCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCGCCCGGCGGGGA---TGCGCTTC 925
          || |||||     |     | | ||  ||||   |  | |||||||||     ||| |
Db    881 GCGTGCGCCCCGGGCAGCGCGTGTACGTGGTGGCTGAACGCGGCGGGGACCGCCGGCTGC 940

Qy    926 GGCCAGCGCGCGTGGCCCGTGTGGC---GCGGGAGGAAGCCGTGGGCGTGTTCGCGCCGC 982
          ||| ||    |||  | | ||| |   ||| |||||  |  | |||||  || |||||||
Db    941 TGCCCGCCGCGGTGCACAGCGTGACGCTGCGAGAGGAGGAGGCGGGCGCGTACGCGCCGC 1000

Qy    983 TCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGCGGTTCTGG 1042
          |||| |||||||| ||  | ||  | |||   || || |||| ||||||| ||  | |
Db   1001 TCACGGCGCACGGCACCATTCTCATCAACCGGGTGCTCGCCTCGTGCTACGCTGTCATCG 1060

Qy   1043 AGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGCGCTAGGGG 1102
          ||   |||   ||||| ||||| || || || || ||  | |||  |||||||||   ||
Db   1061 AGGAGCACAGCTGGGCACACCGGGCCTTCGCGCCTTTCCGCCTGGCGCACGCGCTGCTGG 1120

Qy   1103 CGCTGCT 1109
          |   |||
Db   1121 CCGCGCT 1127
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RESULT   6
US-08-356-060A-4
; Sequence 4, Application US/08356060A
; Patent No. 5844079
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  47
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/356,060A
;      FILING DATE:  14-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1313 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1314
US-08-356-060A-4


  Query Match             35.2%;  Score 419.8;  DB 2;  Length 1313;
  Best Local Similarity   64.5%;  Pred. No. 1.9e-79;
  Matches  701;  Conservative    0;  Mismatches  362;  Indels   24;  Gaps    4;

Qy     41 CACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGGCCGGGGGCCGGTTGGCCGGCGCC 100
          | || |||| |   || |  | |  ||| ||||| ||| |||||   |      |||| |
Db     47 CGCTGCTGGTGTGCCCCGGGCTGGCCTGTGGGCCCGGCAGGGGGTTTGGAAAGAGGCGGC 106

Qy    101 GCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGCCAG 160
          |      | |||  ||||    ||  ||  |||||||| ||| | |||  |||  | |
Db    107 AC------CCCAAAAAGCTGACCCCTTTAGCCTACAAGCAGTTTATTCCCAACGTAGCCG 160

Qy    161 AGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAGGGTGGCAAGGGGCTCCGAGCGCT 220
          ||  |||||| || ||||| ||    |   || |||| | |  ||||   |||||| || |
Db    161 AGAAGACCCTAGGGGCCAGCGGCAGATATGAAGGGAAGATCACAAGAAACTCCGAACGAT 220

Qy    221 TCCGGGACCTCGTGCCCAACTACAACCCCGACATCATCTTCAAGGATGAGGAGAACAGTG 280
          |   ||| |||   ||||| |||||||||||||||| || ||||||||||| ||||  |
Db    221 TTAAGGAACTCACCCCCAATTACAACCCCGACATCATATTTAAGGATGAGGAAAACACGG 280

Qy    281 GAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAGGGTGAACGCTTTGGCCATTGCCG 340
          |||| ||||| ||||||||  || | |||||  || | | | || || ||||||||  | |
Db    281 GAGCAGACCGGCTGATGACTCAGAGGTGCAAAGACAAGTTAAATGCCTTGGCCATCTCTG 340

Qy    341 TGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACGGCC 400
          |||||||  |||||| |||||| | || |||||||| |||||||||| ||||||||||
Db    341 TGATGAACCAGTGGCCTGGAGTGAGGCTGCGAGTGACCGAGGGCTGGGATGAGGACGGCC 400

Qy    401 ACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACC 460
          | ||  |  |||| || || ||||| || || || ||  ||||||||| ||||| ||||
Db    401 ATCATTCAGAGGAGTCTCTACACTATGAGGGTCGAGCAGTGGACATCACCACGTCCGACC 460

Qy    461 GCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACTGGG 520
          | ||||||| |||||| ||  |||||||  ||||| || |||||||| || ||||||||||
Db    461 GGGACCGCAGCAAGTACGGCATGCTGGCTCGCCTGGCTGTGGAAGCAGGTTTCGACTGGG 520

Qy    521 TCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGGCGG 580
          ||||||| || |||       ||| |||||   || || ||||| || |||||  ||||||
Db    521 TCTACTATGAATCCAAAGCTCACATCCACTGTTCTGTGAAAGCAGAGAACTCCGTGGCGG 580

Qy    581 TCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGTGCGCCTGTGGAGCGGCGAGCGGA 640
          |    | ||||||||  || ||||||   || || |||| ||||  |  ||||      |
Db    581 CCAAATCCGGCGGCTGTTTCCCGGGATCCGCCACCGTGCACCTGGAGCAGGGCGGCACCA 640

Qy    641 AAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCCGGG 700
          |   | ||  |||  | |  | |||||||| | ||  |||||||| || |     ||||||
Db    641 AGCTGGTGAAGGACTTACGTCCCGGAGACCGCGTGCTGGCGGCTGACGACCAGGGCCGGC 700

Qy    701 TGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCATTTG 760
          || ||  ||       | ||   ||||||||||| |||         |  |       ||
Db    701 TGCTGTACAGCGACTTCCTCACCTTCCTGGACCGCGACGAAGGCGCCAAGAAGGTCTTCT 760

Qy    761 TGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGGTGT 820
            |   | |||||   |  ||| |        ||| ||||||||  ||  |||||||| | |
Db    761 ACGTGATCGAGACGCTGGAGCCGCGCGAGCGCCTGCTGCTCACCGCCGCGCACCTGCTCT 820

Qy    821 TTGCCGCTC-----------GAGGGCCGGCGCCCGCGCCAGGCGACTTTGCACCGGTGT 868
          | |  || |                |||||  |||||| |||| |||   |     |
Db    821 TCGTGGCGCCGCACAACGACTCGGGGCCCACGCCCGGGCCAAGCGCGCTCTTTGCCAGCC 880
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Qy    869 TCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCGCCCGGCGGGGA---TGCGCTTC 925
          || |||||     |     | | ||  ||||   |  | |||||||||      ||| |
Db    881 GCGTGCGCCCCGGGCAGCGCGTGTACGTGGTGGCTGAACGCGGCGGGGACCGCCGGCTGC 940

Qy    926 GGCCAGCGCGCGTGGCCCGTGTGGC---GCGGGAGGAAGCCGTGGGCGTGTTCGCGCCGC 982
          ||| ||    |||  | | ||| |   ||| |||||  |  | |||||| || ||||||||
Db    941 TGCCCGCCGCGGTGCACAGCGTGACGCTGCGAGAGGAGGAGGCGGGCGCGTACGCGCCGC 1000

Qy    983 TCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGCGGTTCTGG 1042
          |||| |||||||| ||  | ||  | |||   || || ||||| |||||||| ||  | |
Db   1001 TCACGGCGCACGGCACCATTCTCATCAACCGGGTGCTCGCCTCGTGCTACGCTGTCATCG 1060

Qy   1043 AGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGCGCTAGGGG 1102
          ||   |||   ||||| ||||| || || || || ||  | |||  |||||||||   ||
Db   1061 AGGAGCACAGCTGGGCACACCGGGCCTTCGCGCCTTTCCGCCTGGCGCACGCGCTGCTGG 1120

Qy   1103 CGCTGCT 1109
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Db   1121 CCGCGCT 1127
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RESULT   7
US-08-460-900C-4
; Sequence 4, Application US/08460900C
; Patent No. 6165747
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    APPLICANT:  Bumcrot, David A.
;    APPLICANT:  Marti-Gorostiza, Elisa
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  62
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  FOLEY, HOAG & ELIOT LLP
;      STREET:  One Post Office Square
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/460,900C
;      FILING DATE:  5-JUNE-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/435,093
;      FILING DATE:  4-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/356,060
;      FILING DATE:  14-DEC-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMV-006.05
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 832-1000
;      TELEFAX:  (617) 832-7000
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1313 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1311
US-08-460-900C-4


  Query Match             35.2%;  Score 419.8;  DB 4;  Length 1313;
  Best Local Similarity   64.5%;  Pred. No. 1.9e-79;
  Matches  701;  Conservative    0;  Mismatches  362;  Indels   24;  Gaps    4;

Qy     41 CACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGGCCGGGGGCCGGTTGGCCGGCGCC 100
          | || |||| |   || |  | |  ||| ||||| ||| |||||   |      |||| |
Db     47 CGCTGCTGGTGTGCCCCGGGCTGGCCTGTGGGCCCGGCAGGGGGTTTGGAAAGAGGCGGC 106

Qy    101 GCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGCCAG 160
          |     | |||  ||||    ||  ||  |||||||||| ||| | |||  |||  | |
Db    107 AC------CCCAAAAAGCTGACCCCTTTAGCCTACAAGCAGTTTATTCCCAACGTAGCCG 160

Qy    161 AGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAGGGTGGCAAGGGGCTCCGAGCGCT 220
          ||  |||||| || ||||| ||   |   || |||| | |  ||||   |||||| || |
Db    161 AGAAGACCCTAGGGGCCAGCGGCAGATATGAAGGGAAGATCACAAGAAACTCCGAACGAT 220

Qy    221 TCCGGGACCTCGTGCCCAACTACAACCCCGACATCATCTTCAAGGATGAGGAGAACAGTG 280
          |   ||| |||   ||||| ||||||||||||||||| || ||||||||||| ||||  |
Db    221 TTAAGGAACTCACCCCCAATTACAACCCCGACATCATATTTAAGGATGAGGAAAACACGG 280

Qy    281 GAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAGGGTGAACGCTTTGGCCATTGCCG 340
          |||| ||||| ||||||||  || | ||||| || | | | || || ||||||||  | |
Db    281 GAGCAGACCGGCTGATGACTCAGAGGTGCAAAGACAAGTTAAATGCCTTGGCCATCTCTG 340

Qy    341 TGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACGGCC 400
          ||||||||  |||||| |||||| | || ||||||||| |||||||||| ||||||||||
Db    341 TGATGAACCAGTGGCCTGGAGTGAGGCTGCGAGTGACCGAGGGCTGGGATGAGGACGGCC 400

Qy    401 ACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACC 460
          | ||  |  |||| || || ||||| || || || ||  ||||||||||  ||||| ||||
Db    401 ATCATTCAGAGGAGTCTCTACACTATGAGGGTCGAGCAGTGGACATCACCACGTCCGACC 460

Qy    461 GCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACTGGG 520
          | ||||||| |||||| ||  |||||||  ||||| || |||||||| || ||||||||||
Db    461 GGGACCGCAGCAAGTACGGCATGCTGGCTCGCCTGGCTGTGGAAGCAGGTTTCGACTGGG 520

Qy    521 TCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGGCGG 580
          ||||||| || |||      ||| |||||   || || ||||| || |||||  ||||||
Db    521 TCTACTATGAATCCAAAGCTCACATCCACTGTTCTGTGAAAGCAGAGAACTCCGTGGCGG 580

Qy    581 TCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGTGCGCCTGTGGAGCGGCGAGCGGA 640
          |    | |||||||| || ||||||   || || |||| |||  |   ||||     |
Db    581 CCAAATCCGGCGGCTGTTTCCCGGGATCCGCCACCGTGCACCTGGAGCAGGGCGGCACCA 640

Qy    641 AAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCCGGG 700
          |   | ||  |||  | |  | |||||||| | ||  |||||| || |     ||||||
Db    641 AGCTGGTGAAGGACTTACGTCCCGGAGACCGCGTGCTGGCGGCTGACGACCAGGGCCGGC 700

Qy    701 TGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCATTTG 760
          || ||  ||      | ||   ||||||||||||| |||         |  |     ||
Db    701 TGCTGTACAGCGACTTCCTCACCTTCCTGGACCGCGACGAAGGCGCCAAGAAGGTCTTCT 760

Qy    761 TGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGGTGT 820
          |   | |||||   |  ||| |         ||| |||||||  ||  ||||||| | |
Db    761 ACGTGATCGAGACGCTGGAGCCGCGCGAGCGCCTGCTGCTCACCGCCGCGCGCACCTGCTCT 820

Qy    821 TTGCCGCTC------------GAGGGCCGGCGCCCGCGCCAGGCGACTTTGCACCGGTGT 868
          | |  || |              |||||  |||||| |||| |||   |     |
Db    821 TCGTGGCGCCGCACAACGACTCGGGGCCCACGCCCGGGCCAAGCGCGCTCTTTGCCAGCC 880

Qy    869 TCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCGCCCGGCGGGGA---TGCGCTTC 925
          || |||||     |     | | ||  ||||   |  | |||||||||      ||| |
Db    881 GCGTGCGCCCCGGGCAGCGCGTGTACGTGGTGGCTGAACGCGGCGGGGACCGCCGGCTGC 940

Qy    926 GGCCAGCGCGCGTGGCCCGTGTGGC---GCGGGAGGAAGCCGTGGGCGTGTTCGCGCCGC 982
          ||| ||    |||  | | ||| |   ||| |||||  |  | |||||| || ||||||||
Db    941 TGCCCGCCGCGGTGCACAGCGTGACGCTGCGAGAGGAGGAGGCGGGCGCGTACGCGCCGC 1000
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Qy    983 TCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGCGGTTCTGG 1042
          |||| |||||||| ||  | ||  | |||   || || ||||| |||||||| ||  | |
Db   1001 TCACGGCGCACGGCACCATTCTCATCAACCGGGTGCTCGCCTCGTGCTACGCTGTCATCG 1060

Qy   1043 AGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGCGCTAGGGG 1102
          ||   |||   ||||| ||||| || || || || ||  | |||  |||||||||   ||
Db   1061 AGGAGCACAGCTGGGCACACCGGGCCTTCGCGCCTTTCCGCCTGGCGCACGCGCTGCTGG 1120

Qy   1103 CGCTGCT 1109
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Db   1121 CCGCGCT 1127


RESULT   8
US-08-757-230A-1
; Sequence 1, Application US/08757230A
; Patent No. 6235885
; GENERAL INFORMATION:
;  APPLICANT: Thomas M. Jessell, et al.
;  TITLE OF INVENTION: RAT HEDGEHOG PROTEIN-1 (VHH-1)
;  FILE REFERENCE: 0575/45375-1/JPW/SHS/MVM
;  CURRENT APPLICATION NUMBER: US/08/757,230A
;  CURRENT FILING DATE:  1996-11-27
;  NUMBER OF SEQ ID NOS: 9
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
;   LENGTH: 1715
;   TYPE: DNA
;   ORGANISM: RAT
;   FEATURE:
;   NAME/KEY: CDS
;   LOCATION: (315)..(1625)
US-08-757-230A-1


  Query Match             34.2%;  Score 407;  DB 4;  Length 1715;
  Best Local Similarity   63.8%;  Pred. No. 9.1e-77;
  Matches  693;  Conservative    0;  Mismatches  370;  Indels   24;  Gaps    4;

Qy     41 CACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGGCCGGGGGCCGGTTGGCCGGCGCC 100
          | || |||| |   || |  | |  ||| ||||| ||| |||||   |      |||  |
Db    361 cgctgctggtgtccccggactggcctgtgggcccggcaggggtttggaaagaggcagc 420

Qy    101 GCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGCCAG 160
          |      | |||  ||||    ||  ||  |||||||| ||| | |||  |||  | |
Db    421 ac------cccaaaaagctgacccctttagcctacaagcagtttatccccaacgtagccg 474

Qy    161 AGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAGGGTGGCAAGGGGCTCCGAGCGCT 220
          ||  |||||| || ||||| || | |   || |||| | |  ||||   |||||| || |
Db    475 agaagaccctaggggccagcggccgatatgaagggaagatcacaagaaactccgaacgat 534

Qy    221 TCCGGGACCTCGTGCCCAACTACAACCCCGACATCATCTTCAAGGATGAGGAGAACAGTG 280
          |   ||| |||   ||||| |||||||||||||||||| || ||||||||||| |||| ||
Db    535 ttaaggaactcacccccaattacaaccccgacatcatatttaaggatgaggaaaacactg 594

Qy    281 GAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAGGGTGAACGCTTTGGCCATTGCCG 340
          |||| ||||| ||||||||  || | ||||| || | | | || || |||||||| . |||
Db    595 gagcagaccggctgatgactcagaggtgcaaagacaagttaaatgccttggccatctccg 654

Qy    341 TGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACGGCC 400
          |||||||| |||||| ||||||   || ||||||||||||||||||| ||||||||||
Db    655 tgatgaaccagtggcctggagtgaagcttcgagtgactgagggctgggatgaggacggcc 714

Qy    401 ACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACC 460
          | ||  |  |||| || || ||||| || || || ||  |||||||||| |||||||||
Db    715 atcattcagaggagtctctacactatgagggtcgagcagtggacatcaccacgtctgaca 774

Qy    461 GCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACTGGG 520
          | ||||||| |||||||||  ||||||| ||||| || ||||| || || ||||||||||
Db    775 gggaccgcagcaagtatggcatgctggctcgcctggctgtggaggctggattcgactggg 834

Qy    521 TCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGGCGG 580
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Db    835 tctactatgaatccaaagctcgcatccactgctctgtgaaagcagagaactccgtggcgg 894

Qy    581 TCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGTGCGCCTGTGGAGCGGCGAGCGGA 640
          |    | | |||||||||| ||||||   || || |||| |||   |   || |     |
Db    895 ccaaatctgacggctgcttcccgggatcagccacagtgcacctggagcagggtggcacca 954

Qy    641 AAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCCGGG 700
          |      ||  ||| ||    | ||| ||| | ||  ||||||| || |     ||||||
Db    955 agttagtgaaggatctaagtcccggggaccgcgtgctggcggctgacgaccagggccggc 1014

Qy    701 TGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCATTTG 760
          || ||  ||       | ||   ||||||||||||| |||         |  |      ||
Db   1015 tgctgtacagcgacttcctcaccttcctggacgcgcgacgaaggtgccaagaaggtcttct 1074

Qy    761 TGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGGTGT 820
            |   | |||||   |  ||| |         ||| |||||||  ||  ||||||| | |
Db   1075 acgtgatcgagacgcgggagccgcgggagcgtctgctgctcactgccgcgcacctgctct 1134

Qy    821 TTGCCGCTC-----------GAGGGCCGGCGCCCGCGCCAGGCGACTTTGCACCGGTGT 868
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Db   1135 tcgtggcgccgcacaacgactccgggcccactccgggaccgagcccactcttcgccagcc 1194

Qy    869 TCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCGCCCGGCGGGGA---TGCGCTTC 925
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Db   1195 gcgtgcgtccggggcagcgcgtgtacgtggtggctgaacgcggcggggacccgccggctgc 1254

Qy    926 GGCCAGCGCGCGTGGCCCGTGTGGCG---CGGGAGGAAGCCGTGGGCGTGTTCGCGCCGC 982
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Db   1255 tgcccgccgcggtgcacagcgtaacgctacgagaggaggcggcgggtgcgtacgcgccgc 1314

Qy    983 TCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGCGGTTCTGG 1042
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Db   1315 tcacggcggacggcaccattctcatcaaccgggtgctcgcctcgtgctacgcagtcatcg 1374

Qy   1043 AGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGCGCTAGGGG 1102
          ||   |||   ||||| ||||| || || || ||||  | |||  |||||||||   ||
Db   1375 aggagcacagctgggcacaccgggccttcgcgcccttccgcctggcgcacgcgctgctgg 1434

Qy   1103 CGCTGCT 1109
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RESULT   9
PCT-US95-02315-1
; Sequence 1, Application PC/TUS9502315
;  GENERAL INFORMATION:
;    APPLICANT:  Jessell, Thomas M.
;    APPLICANT:  Dodd, Jane
;    APPLICANT:  Roelink, Henk
;    APPLICANT:  Edlund, Thomas
;    TITLE OF INVENTION:  DNA ENCODING A VERTEBRATE HOMOLOG OF
;    TITLE OF INVENTION:  HEDGEHOG, VHH-1, EXPRESSED BY THE NOTOCHORD, AND USES
;    TITLE OF INVENTION:  THEREOF
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Cooper & Dunham
;      STREET:  1185 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10036
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/02315
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
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;       NAME:  John P. White
;       REGISTRATION NUMBER:  28,678
;       REFERENCE/DOCKET NUMBER:  45375-A-PCT
;     TELECOMMUNICATION INFORMATION:
;       TELEPHONE:  (212) 278-0400
;       TELEFAX:  (212) 391-0525
;   INFORMATION FOR SEQ ID NO:  1:
;     SEQUENCE CHARACTERISTICS:
;       LENGTH:  1715 base pairs
;       TYPE:  nucleic acid
;       STRANDEDNESS:  single
;       TOPOLOGY:  linear
;     MOLECULE TYPE:  cDNA
;     FEATURE:
;       NAME/KEY:  CDS
;       LOCATION:  315..1628
PCT-US95-02315-1


  Query Match             34.2%;  Score 407;  DB 5;  Length 1715;
  Best Local Similarity   63.8%;  Pred. No. 9.1e-77;
  Matches  693;  Conservative    0;  Mismatches  370;  Indels   24;  Gaps    4;

Qy      41 CACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGGCCGGGGGCCGGTTGGCCGGCGCC 100
           | || |||| |   || |  | |  ||| ||||| ||| |||||   |       |||  |
Db     361 CGCTGCTGGTGTGCCCCGGACTGGCCTGTGGGCCCGGCAGGGGGTTTGGAAAGAGGCAGC 420

Qy     101 GCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGCCAG 160
           |      | |||  ||||    ||  ||  |||||||| ||| | |||  |||  | |
Db     421 AC------CCCAAAAAGCTGACCCCTTTAGCCTACAAGCAGTTTATCCCCAACGTAGCCG 474

Qy     161 AGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAGGGTGGCAAGGGGCTCCGAGCGCT 220
           ||  |||||| || ||||| || | |   || |||| | |  ||||   |||||| || |
Db     475 AGAAGACCCTAGGGGCCAGCGGCCGATATGAAGGGAAGATCACAAGAAACTCCGAACGAT 534

Qy     221 TCCGGGACCTCGTGCCCAACTACAACCCCGACATCATCTTCAAGGATGAGGAGAACAGTG 280
           |   ||| |||   ||||| |||||||||||||||||| || ||||||||||| |||| ||
Db     535 TTAAGGAACTCACCCCCAATTACAACCCCGACATCATATTTAAGGATGAGGAAAACACTG 594

Qy     281 GAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAGGGTGAACGCTTTGGCCATTGCCG 340
           |||| ||||| |||||||  || | ||||| || | | || || |||||||  |||
Db     595 GAGCAGACCGGCTGATGACTCAGAGGTGCAAAGACAAGTTAAATGCCTTGGCCATCTCCG 654

Qy     341 TGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACGGCC 400
           ||||||||  |||||| ||||||   || ||||||||||||||||||| ||||||||||
Db     655 TGATGAACCAGTGGCCTGGAGTGAAGCTTCGAGTGACTGAGGGCTGGGATGAGGACGGCC 714

Qy     401 ACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACC 460
           | ||  |  |||| || || |||| || || || ||  |||||||||| |||||||||
Db     715 ATCATTCAGAGGAGTCTCTACACTATGAGGGTCGAGCAGTGGACATCACCACGTCTGACA 774

Qy     461 GCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACTGGG 520
           | ||||||| |||||||||  |||||| |||| || |||| || || ||||||||||
Db     775 GGGACCGCAGCAAGTATGGCATGCTGGCTCGCCTGGCTGTGGAGGCTGGATTCGACTGGG 834

Qy     521 TCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGGCGG 580
           ||||||| || |||      | | ||||   || || ||||| || |||||  ||||||
Db     835 TCTACTATGAATCCAAAGCTCGCATCCACTGCTCTGTGAAAGCAGAGAACTCCGTGGCGG 894

Qy     581 TCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGTGCGCCTGTGGAGCGGCGAGCGGA 640
           |    | | |||||||||| ||||||   || || |||| ||||  |   || |     |
Db     895 CCAAATCTGACGGCTGCTTCCCGGGATCAGCCACAGTGCACCTGGAGCAGGGTGGCACCA 954

Qy     641 AAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCCGGG 700
           |     ||  ||| ||    | ||| ||| | ||  |||||||| || |     ||||||
Db     955 AGTTAGTGAAGGATCTAAGTCCCGGGGACCGCGTGCTGGCGGCTGACGACCAGGGCCGGC 1014

Qy     701 TGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCATTTG 760
           || ||  ||      | ||   |||||||||||| |||       |  |      ||
Db    1015 TGCTGTACAGCGACTTCCTCACCTTCCTGGACCGCGACGAAGGTGCCAAGAAGGTCTTCT 1074

Qy     761 TGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGGTGT 820
             |   | |||||   |  ||| |        ||| |||||||  ||  |||||||| | |

Db    1075 ACGTGATCGAGACGCGGGAGCCGCGGGAGCGTCTGCTGCTCACTGCCGCGCACCTGCTCT 1134

Qy     821 TTGCCGCTC-----------GAGGGCCGGCGCCCGCGCCAGGCGACTTTGCACCGGTGT 868
           | |  || |              |||||  | || |  ||  ||     |     |
Db    1135 TCGTGGCGCCGCACAACGACTCCGGGCCCACTCCGGGACCGAGCCCACTCTTCGCCAGCC 1194

Qy     869 TCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCGCCCGGCGGGGA---TGCGCTTC 925
           || ||| | |   |      | | ||  ||||   |  | |||||||||      ||| |
Db    1195 GCGTGCGTCCGGGGCAGCGCGTGTACGTGGTGGCTGAACGCGGCGGGGACCGCCGGCTGC 1254

Qy     926 GGCCAGCGCGCGTGGCCCGTGTGGCG---CGGGAGGAAGCCGTGGGCGTGTTCGCGCCGC 982
           ||| ||    |||  | | ||  ||    || ||||| || | ||| | || ||||||||
Db    1255 TGCCCGCCGCGGTGCACAGCGTAACGCTACGAGAGGAGGCGGCGGGTGCGTACGCGCCGC 1314

Qy     983 TCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGCGGTTCTGG 1042
           |||| ||| |||| ||  | ||  | |||   || || ||||| |||||||| ||  | |
Db    1315 TCACGGCGGACGGCACCATTCTCATCAACCGGGTGCTCGCCTCGTGCTACGCAGTCATCG 1374

Qy    1043 AGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGCGCTAGGGG 1102
           ||   |||  ||||| ||||| || || || ||||  | |||  |||||||||   ||
Db    1375 AGGAGCACAGCTGGGCACACCGGGCCTTCGCGCCCTTCCGCCTGGCGCACGCGCTGCTGG 1434

Qy    1103 CGCTGCT 1109
           |   |||
Db    1435 CCGCGCT 1441


RESULT  10
US-08-356-060A-6
; Sequence 6, Application US/08356060A
; Patent No. 5844079
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  47
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/356,060A
;      FILING DATE:  14-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1425 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
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;      LOCATION:  1..1425
US-08-356-060A-6

  Query Match             32.8%;  Score 390.6;  DB 2;  Length 1425;
  Best Local Similarity   61.9%;  Pred. No. 2.3e-73;
  Matches  711;  Conservative    0;  Mismatches  369;  Indels   69;  Gaps    3;

Qy      18 TCTACTGCCCTTGTGCTGCTTGGCACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGG 77
           ||| ||||   |   ||   | || ||||      | |  | |   ||||| |||||
Db      21 TCTGCTGCTAGTCCTCGTCTCCTCGCTGCTGGTATGCTCGGGACTGGCGTGCGGACCGGG 80

Qy      78 CCGGGGGCCGGTTGGCCGGCGCCGCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAA 137
           | |||||   |      || | | |      | |||  ||||    ||  ||  ||||||
Db      81 CAGGGGGTTCGGGAAGAGGAGGCAC------CCCAAAAAGCTGACCCCTTTAGCCTACAA 134

Qy     138 GCAATTTGTGCCCGGCGTGCCAGAGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAG 197
           ||| ||| | |||   ||| | |||  |||||| |||||||| ||       || ||||
Db     135 GCAGTTTATCCCCAATGTGGCCGAGAAGACCCTAGGCGCCAGCGGAAGGTATGAAGGGAA 194

Qy     198 GGTGGCAAGGGGCTCCGAGCGCTTCCGGGACCTCGTGCCCAACTACAACCCCGACATCAT 257
           | |  | ||   |||||||| ||   ||| |||  |||| ||||||||||||||||
Db     195 GATCTCCAGAAACTCCGAGCGATTTAAGGAACTCACCCCCAATTACAACCCCGACATCAT 254

Qy     258 CTTCAAGGATGAGGAGAACAGTGGAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAG 317
           || |||||||| || ||||  ||||| ||| | ||||||||  || | || ||||| |
Db     255 ATTTAAGGATGAAGAAAACACCGGAGCGGACAGGCTGATGACTCAGAGGTGTAAGGACAA 314

Qy     318 GGTGAACGCTTTGGCCATTGCCGTGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGAC 377
           | ||||||||||||||||  | |||||||||  |||||| ||||||   || || |||||
Db     315 GTTGAACGCTTTGGCCATCTCGGTGATGAACCAGTGGCCAGGAGTGAAACTGCGGGTGAC 374

Qy     378 TGAGGGCTGGGACGAGGACGGCCACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGC 437
           |||||||||||||| || |||||||||  |  |||| || || |||||||| ||||| ||
Db     375 CGAGGGCTGGGACGAAGATGGCCACCACTCAGAGGAGTCTCTGCACTACGAGGGCCGCGC 434

Qy     438 TTTGGACATCACTACGTCTGACCGCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGC 497
           ||||||||| ||||||||||||||||||| |||||| ||  ||||||| ||||| ||
Db     435 AGTGGACATCACCACGTCTGACCGCGACCGCAGCAAGTACGGCATGCTGGCCCGCCTGGC 494

Qy     498 AGTGGAAGCCGGCTTCGACTGGGTCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGT 557
           ||||| ||||||||||||||||| ||||||||||||      ||  |||||   |||||
Db     495 GGTGGAGGCCGGCTTCGACTGGGTGTACTACGAGTCCAAGGCACATATCCACTGCTCGGT 554

Qy     558 CAAAGCTGATAACTCACTGGCGGTCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGT 617
           ||||| || |||||  |||||| |    |||| ||||||| |||||    || || ||
Db     555 GAAAGCAGAGAACTCGGTGGCGGCCAAATCGGGAGGCTGCTTCCCGGGCTCGGCCACGGT 614

Qy     618 GCGCCTGTGGAGCGGCGAGCGGAAAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTT 677
           || |||| |   ||||      ||   | ||  ||| |||  || ||| ||| | ||  |
Db     615 GCACCTGGAGCAGGGCGGCACCAAGCTGGTGAAGGACCTGAGCCCCGGGGACCGCGTGCT 674

Qy     678 GGCGGCCGATGCGTCAGGCCGGGTGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGA 737
           |||||| || |     |||||| || |   ||      | ||    |||||||||| ||
Db     675 GGCGGCGGACGACCAGGGCCGGCTGCTCTACAGCGACTTCCTCACTTTCCTGGACCGCGA 734

Qy     738 CTTGCAGCGCCGGGCTTCATTTGTGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTT 797
           |      | |      ||    |  | |||||   |  ||| |       ||| |
Db     735 CGACGGCGCCAAGAAGGTCTTCTACGTGATCGAGACGCGGGAGCCGCGCGAGCGCCTGCT 794

Qy     798 GCTCACGCCCTGGCACCTGGTGTTTGCCGC-----------TCGAGGGCCGGCGCCCGCG 846
           ||||||  ||  ||||||| | ||||  ||            |  || |    |   ||
Db     795 GCTCACCGCCGCGCACCTGCTCTTTGTGGCGCCGCACAACGACTCGGCCACCGGGGAGCC 854

Qy     847 CCAGGCGACTTTGCACCGGTGTTCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCG 906
           | ||||| | | |  |  | |  |||   ||||   ||| |||||| |||||     |
Db     855 CGAGGCGTCCTCGGGCTCGGGGCCGCCTTCCGGGGGCGCACTGGGGCCTCGGGCGCTGTT 914

Qy     907 CCCGGCGGGGATGCGCTTCGGCCAGCGCGCGTGGCCCGTG------------------- 946
           | |      | |||||   |||||||||| ||     |||
Db     915 CGCCAGCCGCGTGCGCCCGGGCCAGCGCGTGTACGTGGTGGCCGAGCGTGACGGGGACCG 974

Qy     947 --------------------------------TGGCGCGGGAGGAAGCCGTGGGCGTGTT 974
                                                | |||||  |||| |||||  |
Db     975 CCGGCTCCTGCCCGCCGCTGTGCACAGCGTGACCCTAAGCGAGGAGGCCGCGGGCGCCTA 1034

Qy     975 CGCGCCGCTCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGC 1034
           ||||||||||||  || || || ||  | ||  | |||   || ||||||| ||||||||
Db    1035 CGCGCCGCTCACGGCCCAGGGCACCATTCTCATCAACCGGGTGCTGGCCTCGTGCTACGC 1094

Qy    1035 GGTTCTGGAGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGC 1094
           |||  | |||   |||   |||||||||||| || || || |||||  | |||  ||||||
Db    1095 GGTCATCGAGGAGCACAGCTGGGCGCACCGGGCCTTCGCGCCCTTCCGCCTGGCGCACGC 1154

Qy    1095 GCTAGGGGC 1103
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Db    1155 GCTCCTGGC 1163


RESULT  11
US-08-460-900C-6
; Sequence 6, Application US/08460900C
; Patent No. 6165747
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    APPLICANT:  Bumcrot, David A.
;    APPLICANT:  Marti-Gorostiza, Elisa
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  62
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  FOLEY, HOAG & ELIOT LLP
;      STREET:  One Post Office Square
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/460,900C
;      FILING DATE:  5-JUNE-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/435,093
;      FILING DATE:  4-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/356,060
;      FILING DATE:  14-DEC-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMV-006.05
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 832-1000
;      TELEFAX:  (617) 832-7000
;  INFORMATION FOR SEQ ID NO:  6:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1425 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1425
US-08-460-900C-6
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  Query Match            32.8%;  Score 390.6;  DB 4;  Length 1425;
  Best Local Similarity  61.9%;  Pred. No. 2.3e-73;
  Matches  711;  Conservative    0;  Mismatches  369;  Indels   69;  Gaps   3;

Qy      18 TCTACTGCCCTTGTGCTGCTTGGCACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGG 77
           ||| ||||   |   |  ||   | || ||||      | |  | |   ||||| |||||
Db      21 TCTGCTGCTAGTCCTCGTCTCCTCGCTGCTGGTATGCTCGGGACTGGCGTGCGGACCGGG 80

Qy      78 CCGGGGGCCGGTTGGCCGGCGCCGCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAA 137
           | |||||   |      || | | |      | |||  ||||    ||  ||  ||||||
Db      81 CAGGGGGTTCGGGAAGAGGAGGCAC------CCCAAAAAGCTGACCCCTTTAGCCTACAA 134

Qy     138 GCAATTTGTGCCCGGCGTGCCAGAGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAG 197
           ||| ||| | |||   ||| | |||  |||||| ||||||| ||        || ||||
Db     135 GCAGTTTATCCCCAATGTGGCCGAGAAGACCCTAGGCGCCAGCGGAAGGTATGAAGGGAA 194

Qy     198 GGTGGCAAGGGGCTCCGAGCGCTTCCGGGACCTCGTGCCCAACTACAACCCCGACATCAT 257
           | |  | ||   |||||||| ||   ||| |||   ||||| ||||||||||||||||
Db     195 GATCTCCAGAAACTCCGAGCGATTTAAGGAACTCACCCCCAATTACAACCCCGACATCAT 254

Qy     258 CTTCAAGGATGAGGAGAACAGTGGAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAG 317
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Db     255 ATTTAAGGATGAAGAAAACACCGGAGCGGACAGGCTGATGACTCAGAGGTGTAAGGACAA 314

Qy     318 GGTGAACGCTTTGGCCATTGCCGTGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGAC 377
           | |||||||||||||   | |||||||||  |||||| ||||||   || || |||||
Db     315 GTTGAACGCTTTGGCCATCTCGGTGATGAACCAGTGGCCAGGAGTGAAACTGCGGGTGAC 374

Qy     378 TGAGGGCTGGGACGAGGACGGCCACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGC 437
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Db     375 CGAGGGCTGGGACGAAGATGGCCACCACTCAGAGGAGTCTCTGCACTACGAGGGCCGCGC 434

Qy     438 TTTGGACATCACTACGTCTGACCGCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGC 497
           |||||||||| ||||||||||||||||||| |||||| ||  |||||||  ||||| ||
Db     435 AGTGGACATCACCACGTCTGACCGCGACCGCAGCAAGTACGGCATGCTGGCCCGCCTGGC 494

Qy     498 AGTGGAAGCCGGCTTCGACTGGGTCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGT 557
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Db     495 GGTGGAGGCCGGCTTCGACTGGGTGTACTACGAGTCCAAGGCACATATCCACTGCTCGGT 554

Qy     558 CAAAGCTGATAACTCACTGGCGGTCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGT 617
           |||||  || |||||  ||||||  |    |||| ||||||||  |||||    ||  ||  ||
Db     555 GAAAGCAGAGAACTCGGTGGCGGCCAAATCGGGAGGCTGCTTCCCGGGCTCGGCCACGGT 614

Qy     618 GCGCCTGTGGAGCGGCGAGCGGAAAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTT 677
           ||  ||||   |   ||||     ||   | ||  ||| |||  ||  ||| ||| | ||  |
Db     615 GCACCTGGAGCAGGGCGGCACCAAGCTGGTGAAGGACCTGAGCCCCGGGGACCGCGTGCT 674

Qy     678 GGCGGCCGATGCGTCAGGCCGGGTGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGA 737
           ||||||  || |     ||||||  || |   ||      | ||    ||||||||||  ||
Db     675 GGCGGCGGACGACCAGGGCCGGCTGCTCTACAGCGACTTCCTCACTTTCCTGGACCGCGA 734

Qy     738 CTTGCAGCGCCGGGCTTCATTTGTGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTT 797
           |        |  |     ||    |  | |||||   |  ||| |        ||| |
Db     735 CGACGGCGCCAAGAAGGTCTTCTACGTGATCGAGACGCGGGAGCCGCGCGAGCGCCTGCT 794

Qy     798 GCTCACGCCCTGGCACCTGGTGTTTGCCGC-----------TCGAGGGCCGGCGCCCGCG 846
           ||||||  ||  |||||||  | ||||  ||            |  || |    |   ||
Db     795 GCTCACCGCCGCGCACCTGCTCTTTGTGGCGCCGCACAACGACTCGGCCACCGGGGAGCC 854

Qy     847 CCAGGCGACTTTGCACCGGTGTTCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCG 906
           | ||||| | | |   | |  |||   ||||   ||| ||||||  |||||      |
Db     855 CGAGGCGTCCTCGGGCTCGGGGCCGCCTTCCGGGGGCGCACTGGGGCCTCGGGCGCTGTT 914

Qy     907 CCCGGCGGGGATGCGCTTCGGCCAGCGCGCGTGGCCCGTG------------------- 946
           | |      | |||||   |||||||||| ||     |||
Db     915 CGCCAGCCGCGTGCGCCCGGGCCAGCGCGTGTACGTGGTGGCCGAGCGTGACGGGGACCG 974

Qy     947 --------------------------------TGGCGCGGGAGGAAGCCGTGGGCGTGTT 974
                                           | |||||  |||| ||||  |
Db     975 CCGGCTCCTGCCCGCCGCTGTGCACAGCGTGACCCTAAGCGAGGAGGCCGCGGGCGCCTA 1034

Qy     975 CGCGCCGCTCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGC 1034
           |||||||||||| || || || ||  | ||  | |||   || |||||||| ||||||||
Db    1035 CGCGCCGCTCACGGCCCAGGGCACCATTCTCATCAACCGGGTGCTGGCCTCGTGCTACGC 1094

Qy    1035 GGTTCTGGAGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGC 1094
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Db    1095 GGTCATCGAGGAGCACAGCTGGGCGCACCGGGCCTTCGCGCCCTTCCGCCTGGCGCACGC 1154

Qy    1095 GCTAGGGGC 1103
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Db    1155 GCTCCTGGC 1163
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RESULT 12
US-08-748-591-5
; Sequence 5, Application US/08748591
; Patent No. 5759811
; GENERAL INFORMATION:
; APPLICANT: Epstein, Ervin
; APPLICANT: Hu, Zhilan
; APPLICANT: Bonifas, Jeanette
; TITLE OF INVENTION: Mutant Human Hedgehog Gene
; NUMBER OF SEQUENCES: 23
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish and Richardson
; STREET: 2200 Sand Hill Road
; CITY: Menlo Park
; STATE: CA
; COUNTRY: USA
; ZIP: 94025
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.25
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/748,591
; FILING DATE:
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Sherwood, Pamela J
; REGISTRATION NUMBER: 36,677
; REFERENCE/DOCKET NUMBER: 06510/067001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (415) 322-5070
; TELEFAX: (415) 854-0875
; INFORMATION FOR SEQ ID NO: 5:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1576 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
US-08-748-591-5

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  Query Match            32.7%;  Score 389;  DB 1;  Length 1576;
  Best Local Similarity  61.8%;  Pred. No. 5.1e-73;
  Matches  710;  Conservative    0;  Mismatches  370;  Indels   69;  Gaps   3;

Qy      18 TCTACTGCCCTTGTGCTGCTTGGCACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGG 77
           ||| ||||   |   |  ||   | || ||||      | |  | |   ||||| |||||
Db     172 TCTGCTGCTAGTCCTCGTCTCCTCGCTGCTGGTATGCTCGGGACTGGCGTGCGGACCGGG 231

Qy      78 CCGGGGGCCGGTTGGCCGGCGCCGCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAA 137
           | |||||   |      || | | |      | |||  ||||    ||  ||  ||||||
Db     232 CAGGGGGTTCGGGAAGAGGAGGCAC------CCCAAAAAGCTGACCCCTTTAGCCTACAA 285

Qy     138 GCAATTTGTGCCCGGCGTGCCAGAGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAG 197
           ||| ||| | |||   ||| | |||  |||||| ||||||| ||        || ||||
Db     286 GCAGTTTATCCCCAATGTGGCCGAGAAGACCCTAGGCGCCAGCGGAAGGTATGAAGGGAA 345

Qy     198 GGTGGCAAGGGGCTCCGAGCGCTTCCGGGACCTCGTGCCCAACTACAACCCCGACATCAT 257
           | |  | ||   |||||||| ||   ||| |||   ||||| ||||||||||||||||||
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Db    346 GATCTCCAGAAACTCCGAGCGATTTAAGGAACTCACCCCCAATTACAACCCCGACATCAT 405

Qy    258 CTTCAAGGATGAGGAGAACAGTGGAGCCGACCGCCTGATGACCGAGCGTTGCAAGGAGAG 317

Db    406 ATTTAAGGATGAAGAAAACACCGGAGCGGACAGGCTGATGACTCAGAGGTGTAAGGACAA 465

Qy    318 GGTGAACGCTTTGGCCATTGCCGTGATGAACATGTGGCCCGGAGTGCGCCTACGAGTGAC 377

Db    466 GTTGAACGCTTTGGCCATCTCGGTGATGAACCAGTGGCCAGGAGTGAAACTGCGGGTGAC 525

Qy    378 TGAGGGCTGGGACGAGGACGGCCACCACGCTCAGGATTCACTCCACTACGAAGGCCGTGC 437

Db    526 CGAGGGCTGGGACGAAGATGGCTACCACTCAGAGGAGTCTCTGCACTACGAGGGCCGCGC 585

Qy    438 TTTGGACATCACTACGTCTGACCGCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGC 497

Db    586 AGTGGACATCACCACGTCTGACCGCGACCGCAGCAAGTACGGCATGCTGGCCCGCCTGGC 645

Qy    498 AGTGGAAGCCGGCTTCGACTGGGTCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGT 557

Db    646 GGTGGAGGCCGGCTTCGACTGGGTGTACTACGAGTCCAAGGCACATATCCACTGCTCGGT 705

Qy    558 CAAAGCTGATAACTCACTGGCGGTCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGT 617

Db    706 GAAAGCAGAGAACTCGGTGGCGGCCAAATCGGGAGGCTGCTTCCCGGGCTCGGCCACGGT 765

Qy    618 GCGCCTGTGGAGCGGCGAGCGGAAAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTT 677

Db    766 GCACCTGGAGCAGGGCGGCACCAAGCTGGTGAAGGACCTGAGCCCCGGGGACCGCGTGCT 825

Qy    678 GGCGGCCGATGCGTCAGGCCGGGTGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGA 737

Db    826 GGCGGCGGACGACCAGGGCCGGCTGCTCTACAGCGACTTCCTCACTTTCCTGGACCGCGA 885

Qy    738 CTTGCAGCGCCGGGCTTCATTTGTGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTT 797

Db    886 CGACGGCGCCAAGAAGGTCTTCTACGTGATCGAGACGCGGGAGCCGCGCGAGCGCCTGCT 945

Qy    798 GCTCACGCCCTGGCACCTGGTGTTTGCCGC-----------TCGAGGGCCGGCGCCCGCG 846

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Qy    847 CCAGGCGACTTTGCACCGGTGTTCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCG 906

Db   1006 CGAGGCGTCCTCGGGCTCGGGGCCGCCTTCCGGGGGCGCACTGGGGCCTCGGGCGCTGTT 1065

Qy    907 CCCGGCGGGGATGCGCTTCGGCCAGCGCGCGTGGCCCGTG---------- 946

Db   1066 CGCCAGCCGCGTGCGCCCGGGCCAGCGCGTGTACGTGGTGGCCGAGCGTGACGGGGACCG 1125

Qy    947 ----------TGGCGCGGGAGGAAGCCGTGGGCGTGTT 974

Db   1126 CCGGCTCCTGCCCGCCGCTGTGCACAGCGTGACCCTAAGCGAGGAGGCCGCGGGCGCCTA 1185

Qy    975 CGCGCCGCTCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGC 1034

Db   1186 CGCGCCGCTCACGGCCCAGGGCACCATTCTCATCAACCGGGTGCTGGCCTCGTGCTACGC 1245

Qy   1035 GGTTCTGGAGAGTCACCAGTGGGCGCACCGCGCTTTTGCCCCCTTGAGACTGCTGCACGC 1094

Db   1246 GGTCATCGAGGAGCACAGCTGGGCGCACCGGGCCTTCGCGCCCTTCCGCCTGGCGCACGC 1305

Qy   1095 GCTAGGGGC 1103

Db   1306 GCTCCTGGC 1314


RESULT 13
US-08-748-591-10
; Sequence 10, Application US/08748591
; Patent No. 5759811
;  GENERAL INFORMATION:
;    APPLICANT:  Epstein, Ervin
;    APPLICANT:  Hu, Zhilan
;    APPLICANT:  Bonifas, Jeanette
;    TITLE OF INVENTION:  Mutant Human Hedgehog Gene
;    NUMBER OF SEQUENCES:  23
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish and Richardson
;      STREET:  2200 Sand Hill Road
;      CITY:  Menlo Park
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  94025
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/748,591
;      FILING DATE:
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Sherwood, Pamela J
;      REGISTRATION NUMBER:  36,677
;      REFERENCE/DOCKET NUMBER:  06510/067001
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (415) 322-5070
;      TELEFAX:  (415) 854-0875
;  INFORMATION FOR SEQ ID NO:  10:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1576 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  single
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
US-08-748-591-10


  Query Match             32.7%;  Score 389;  DB 1;  Length 1576;
  Best Local Similarity   61.8%;  Pred. No. 5.1e-73;
  Matches  710;  Conservative    0;  Mismatches  370;  Indels   69;  Gaps    3;

Qy      18 TCTACTGCCCTTGTGCTGCTTGGCACTTCTGGCGCTGCCAGCCCAGAGCTGCGGGCCGGG 77

Db     172 TCTGCTGCTAGTCCTCGTCTCCTCGCTGCTGGTATGCTCGGGACTGGCGTGCGGACCGGG 231

Qy      78 CCGGGGGCCGGTTGGCCGGCGCCGCTATGCGCGCAAGCAGCTCGTGCCGCTACTCTACAA 137

Db     232 CAGGGGGTTCGGGAAGAGGAGGCAC------CCCAAAAAGCTGACCCCTTTAGCCTACAA 285

Qy     138 GCAATTTGTGCCCGGCGTGCCAGAGCGGACCCTGGGCGCCAGTGGGCCAGCGGAGGGGAG 197

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Db     466 GTTGAACGCTTTGGCCATCTCGGTGATAAACCAGTGGCCAGGAGTGAAACTGCGGGTGAC 525

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Db     526 CGAGGGCTGGGACGAAGATGGCCACCACTCAGAGGAGTCTCTGCACTACGAGGGCCGCGC 585

Qy     438 TTTGGACATCACTACGTCTGACCGCGACCGCAACAAGTATGGGTTGCTGGCGCGCCTCGC 497

Db     586 AGTGGACATCACCACGTCTGACCGCGACCGCAGCAAGTACGGCATGCTGGCCCGCCTGGC 645
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Qy    498 AGTGGAAGCCGGCTTCGACTGGGTCTACTACGAGTCCCGCAACCACGTCCACGTGTCGGT 557
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Db    646 GGTGGAGGCCGGCTTCGACTGGGTGTACTACGAGTCCAAGGCACATATCCACTGCTCGGT 705

Qy    558 CAAAGCTGATAACTCACTGGCGGTCCGGGCGGGCGGCTGCTTTCCGGGAAATGCAACTGT 617
          ||||| || |||||  |||||| |    |||| ||||||| |||||    || || ||
Db    706 GAAAGCAGAGAACTCGGTGGCGGCCAAATCGGGAGGCTGCTTCCCGGGCTCGGCCACGGT 765

Qy    618 GCGCCTGTGGAGCGGCGAGCGGAAAGGGCTGCGGGAACTGCACCGCGGAGACTGGGTTTT 677
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Db    766 GCACCTGGAGCAGGGCGGCACCAAGCTGGTGAAGGACCTGAGCCCCGGGGACCGCGTGCT 825

Qy    678 GGCGGCCGATGCGTCAGGCCGGGTGGTGCCCACGCCGGTGCTGCTCTTCCTGGACCGGGA 737
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Db    826 GGCGGCGGACGACCAGGGCCGGCTGCTCTACAGCGACTTCCTCACTTTCCTGGACCGCGA 885

Qy    738 CTTGCAGCGCCGGGCTTCATTTGTGGCTGTGGAGACCGAGTGGCCTCCACGCAAACTGTT 797
          |       | |      ||    |   | |||||   |  ||| |        ||| |
Db    886 CGACGGCGCCAAGAAGGTCTTCTACGTGATCGAGACGCGGGAGCCGCGCGAGCGCCTGCT 945

Qy    798 GCTCACGCCCTGGCACCTGGTGTTTGCCGC----------TCGAGGGCCGGCGCCCGCG 846
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Db    946 GCTCACCGCCGCGCACCTGCTCTTTGTGGCGCCGCACAACGACTCGGCCACCGGGGAGCC 1005

Qy    847 CCAGGCGACTTTGCACCGGTGTTCGCGCGCCGGCTACGCGCTGGGGACTCGGTGCTGGCG 906
          | ||||| | | |   | | |  |||   ||||   ||| ||||| |||||      |
Db   1006 CGAGGCGTCCTCGGGCTCGGGGCCGCCTTCCGGGGGCGCACTGGGGCCTCGGGCGCTGTT 1065

Qy    907 CCCGGCGGGGATGCGCTTCGGCCAGCGCGCGTGGCCCGTG-------------------- 946
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Db   1066 CGCCAGCCGCGTGCGCCCGGGCCAGCGCGTGTACGTGGTGGCCGAGCGTGACGGGGACCG 1125

Qy    947 -------------------------------TGGCGCGGGAGGAAGCCGTGGGCGTGTT 974
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Db   1126 CCGGCTCCTGCCCGCCGCTGTGCACAGCGTGACCCTAAGCGAGGAGGCCGCGGGCGCCTA 1185

Qy    975 CGCGCCGCTCACCGCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGC 1034
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Db   1186 CGCGCCGCTCACGGCCCAGGGCACCATTCTCATCAACCGGGTGCTGGCCTCGTGCTACGC 1245

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Qy   1095 GCTAGGGGC 1103
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RESULT  14
US-08-176-427B-1
; Sequence 1, Application US/08176427B
; Patent No. 5789543
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/176,427B
;      FILING DATE:  30-DEC-1993
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1277 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1277
US-08-176-427B-1
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  Query Match             32.0%;  Score 381.4;  DB 1;  Length 1277;
  Best Local Similarity   62.0%;  Pred. No. 1.9e-71;
  Matches  692;  Conservative    0;  Mismatches  386;  Indels   39;  Gaps    4;

Qy    109 CGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGCCAGAGCGGACC 168
          | |||  ||||    ||| ||  ||| ||||| ||| | |||    ||| |||||  ||||
Db    115 CCCAAAAAGCTGACCCCGTTAGCCTATAAGCAGTTTATTCCCAATGTGGCAGAGAAGACC 174

Qy    169 CTGGGCGCCAGTGGGCCAGCGGAGGGGAGGGTGGCAAGGGGCTCCGAGCGCTTCCGGGAC 228
          || || ||||||||    |   || |||| | |  ||||   |||||| | ||    ||
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Db    235 CTAACCCCAAATTACAACCCTGACATTATTTTTAAGGATGAAGAGAACACGGGAGCTGAC 294

Qy    289 CGCCTGATGACCGAGCGTTGCAAGGAGAGGGTGAACGCTTTGGCCATTGCCGTGATGAAC 348
          | ||||||||  |||| |||||||| | | |||| ||  |||| ||  | |||||||||
Db    295 AGACTGATGACTCAGCGCTGCAAGGACAAGCTGAATGCCCTGGCGATCTCGGTGATGAAC 354

Qy    349 ATGTGGCCCGGAGTGCGCCTACGAGTGACTGAGGGCTGGGACGAGGACGGCCACCACGCT 408
            |||||||||  |||   || || ||||| ||||||||||||||||| ||||| ||| |
Db    355 CAGTGGCCCGGGGTGAAGCTGCGGGTGACCGAGGGCTGGGACGAGGATGGCCATCACTCC 414

Qy    409 CAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACCGCGACCGC 468
          ||||  || || |||||||| || || ||  |||||||||| ||||| || || ||||||
Db    415 GAGGAATCGCTGCACTACGAGGGTCGCGCCGTGGACATCACCACGTCGGATCGGGACCGC 474

Qy    469 AACAAGTATGGGTTGCTGGCGCGCCTCGCAGTGGAAGCCGGCTTCGACTGGGTCTACTAC 528
          | |||||| ||  ||||||| |||||||| || || ||||||||||||||||||||||||
Db    475 AGCAAGTACGGAATGCTGGCCCGCCTCGCCGTCGAGGCCGGCTTCGACTGGGTCTACTAC 534

Qy    529 GAGTCCCGCAACCACGTCCACGTGTCGGTCAAAGCTGATAACTCACTGGCGGTCCGGGCG 588
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Db    595 GGAGGCTGCTTCCCTGGCTCAGCCACAGTGCACCTGGAGCATGGAGGCACCAAGCTGGTG 654

Qy    649 CGGGAACTGCACCGCGGAGACTGGGTTTTGGCGGCCGATGCGTCAGGCCGGGTGGTGCCC 708
            ||| |||  ||  || ||| | ||  |||| || || |||   |||||| || |   |
Db    655 AAGGACCTGAGCCCTGGGGACCGCGTGCTGGCTGCTGACGCGGACGGCCGGCTGCTCTAC 714

Qy    709 ACGCCGGTGCTGCTCTTCCTGGACCGGGACTTGCAGCGCCGGGCTTCATTTGTGGCTGTG 768
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Db    715 AGTGACTTCCTCACCTTCCTCGACCGGATGGACAGCTCCCGAAAGCTCTTCTACGTCATC 774

Qy    769 GAGACCGAGTGGCCTCCACGCAAACTGTTGCTCACGCCCTGGCACCTGGTGTTTGCCGCT 828
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Db    775 GAGACGCGGCAGCCCCGGGCCCGGCTGCTACTGACGGCGGCCCACCTGCTCTTTGTGGCC 834

Qy    829 CGAGGGCCGGCGCCCGCGCCAGGCG-ACTTTGCACCGGTGTTCGCGCGC---------- 876
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Db    835 CCCCAGCACAACCAGTCGGAGGCCACAGGGTCCACCAGTGGCCAGGCGCTCTTCGCCAGC 894

Qy    877 ------CGGCTACGCGCTGGGGACTCGGTGCTGGCGCCCGGCGGGGATGCGCTTCGGCCA 930
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Db    895 AACGTGAAGCCTGGCCAACGTGTCTATGTGCTGGGCGAGGGCGGGCAGCAGCTGCTGCCG 954

Qy    931 GCGCGCGTGGCCCGTGTGGC---GCGGGAGGAAGCCGTGGGCGTGTTCGCGCCGCTCACC 987
          |||   ||   | | ||  |   |||||||||| ||    || |  | ||| || ||||||
Db    955 GCGTCTGTCCACAGCGTCTCATTGCGGGAGGAGGCGTCCGGAGCCTACGCCCCACTCACC 1014

Qy    988 GCGCACGGGACGCTGCTGGTGAACGATGTCCTGGCCTCTTGCTACGCGGTTCTGGAGAGT 1047
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Db   1015 GCCCAGGGCACCATCCTCATCAACCGGGTGTTGGCCTCCTGCTACGCCGTCATCGAGGAG 1074

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RESULT 15
US-08-356-060A-1
; Sequence 1, Application US/08356060A
; Patent No. 5844079
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  47
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/356,060A
;      FILING DATE:  14-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  1:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  1277 base pairs
;      TYPE:  nucleic acid
;      STRANDEDNESS:  both
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  cDNA
;    FEATURE:
;      NAME/KEY:  CDS
;      LOCATION:  1..1275
US-08-356-060A-1


  Query Match             32.0%;  Score 381.4;  DB 2;  Length 1277;
  Best Local Similarity   62.0%;  Pred. No. 1.9e-71;
  Matches  692;  Conservative    0;  Mismatches  386;  Indels   39;  Gaps    4;

Qy    109 CGCAAGCAGCTCGTGCCGCTACTCTACAAGCAATTTGTGCCCGGCGTGCCAGAGCGGACC 168
          | |||  ||||    ||| ||  ||| ||||| ||| | |||   ||| |||||  ||||
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Db    355 CAGTGGCCCGGGGTGAAGCTGCGGGTGACCGAGGGCTGGGACGAGGATGGCCATCACTCC 414

Qy    409 CAGGATTCACTCCACTACGAAGGCCGTGCTTTGGACATCACTACGTCTGACCGCGACCGC 468
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Db    415 GAGGAATCGCTGCACTACGAGGGTCGCGCCGTGGACATCACCACGTCGGATCGGGACCGC 474

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Db    715 AGTGACTTCCTCACCTTCCTCGACCGGATGGACAGCTCCCGAAAGCTCTTCTACGTCATC 774

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Db    775 GAGACGCGGCAGCCCCGGGCCCGGCTGCTACTGACGGCGGCCCACCTGCTCTTTGTGGCC 834

Qy    829 CGAGGGCCGGCGCCCGCGCCAGGCG-ACTTTGCACCGGTGTTCGCGCGC---------- 876
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Db    835 CCCCAGCACAACCAGTCGGAGGCCACAGGGTCCACCAGTGGCCAGGCGCTCTTCGCCAGC 894

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GenCore version 4.5

OM protein - protein search, using sw model

Run on: September 7, 2001, 14:00:54 ; Search time 26.04 Seconds
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313.125 Million cell updates/sec

Title: US-08-900-220C-17
Perfect score: 2088
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Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 197339 seqs, 20590346 residues

Total number of hits satisfying chosen parameters: 197339

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_AA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
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2	2008	96.2	396	2	US-08-356-060A-9	Sequence 9, Appli
3	2008	96.2	396	4	US-08-460-900C-9	Sequence 9, Appli
4	1217	58.3	437	1	US-08-176-427B-8	Sequence 8, Appli
5	1217	58.3	437	2	US-08-356-060A-11	Sequence 11, Appl
6	1217	58.3	437	4	US-08-460-900C-11	Sequence 11, Appl
7	1214	58.1	437	3	US-08-946-329A-20	Sequence 20, Appl
8	1214	58.1	437	4	US-08-567-357A-20	Sequence 20, Appl
9	1214	58.1	437	4	US-08-729-743A-20	Sequence 20, Appl
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17	1198	57.4	425	4	US-08-460-900C-8	Sequence 8, Appli
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20	1177	56.4	475	2	US-08-356-060A-13	Sequence 13, Appl
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25	1158	55.5	425	5	PCT-US95-15463-19	Sequence 19, Appl
26	1158	55.5	425	5	PCT-US95-15923-19	Sequence 19, Appl
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28	1154	55.3	416	4	US-08-567-357A-17	Sequence 17, Appl
29	1154	55.3	416	4	US-08-729-743A-17	Sequence 17, Appl
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45	951	45.5	471	4	US-08-460-900C-34	Sequence 34, Appl

ALIGNMENTS

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RESULT   1
US-08-176-427B-4
; Sequence 4, Application US/08176427B
; Patent No. 5789543
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/176,427B
;      FILING DATE:  30-DEC-1993
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  4:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  396 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-176-427B-4


  Query Match             96.2%;  Score 2008;  DB 1;  Length 396;
  Best Local Similarity   96.5%;  Pred. No. 2.7e-214;
  Matches  382;  Conservative    6;  Mismatches    8;  Indels    0;  Gaps    0;

Qy       1 MALLTNLLPLCCLALLALPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGAS 60
             |||  :||||||||||||| |||||||||||||||| |||||||||||||| :||||||||
Db       1 MALPASLLPLCCLALLALSAQSCGPGRGPVGRRRYVRKQLVPLLYKQFVPSMPERTLGAS 60
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Qy      61 GPAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPG 120
           ||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GPAEGRVTRGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPG 120

Qy     121 VRLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRN 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 VRLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRN 180

Qy     181 HVHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVL 240
           |:|||||||||||||||||||||||| ||||||||||||||||||:|||||||||
Db     181 HIHVSVKADNSLAVRAGGCFPGNATVRLRSGERKGLRELHRGDWVLAADAAGRVVPTPVL 240

Qy     241 LFLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAARGPAPAPGDFAPVFARRLRAGDSV 300
           |||||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db     241 LFLDRDLQRRASFVAVETERPPRKLLLTPWHLVFAARGPAPAPGDFAPVFARRLRAGDSV 300

Qy     301 LAPGGDALRPARVARVAREEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQWAHRAFAPL 360
           ||||||||:|||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 LAPGGDALQPARVARVAREEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQWAHRAFAPL 360

Qy     361 RLLHALGALLPGGAVQPTGMHWYSRLLYRLAEELLG 396
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Db     361 RLLHALGALLPGGAVQPTGMHWYSRLLYRLAEELMG 396
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RESULT 2
US-08-356-060A-9
; Sequence 9, Application US/08356060A
; Patent No. 5844079
; GENERAL INFORMATION:
; APPLICANT: Ingham, Phillip W.
; APPLICANT: McMahon, Andrew P.
; APPLICANT: Tabin, Clifford J.
; TITLE OF INVENTION: Vertebrate Embryonic Pattern-Inducing
; TITLE OF INVENTION: Proteins and Uses Related Thereto
; NUMBER OF SEQUENCES: 47
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: LAHIVE & COCKFIELD
; STREET: 60 State Street
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII(text)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/356,060A
; FILING DATE: 14-DEC-1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/176,427
; FILING DATE: 30-DEC-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Vincent, Matthew P.
; REGISTRATION NUMBER: 36,709
; REFERENCE/DOCKET NUMBER: HMI-006CP
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 227-7400
; TELEFAX: (617) 227-5941
; INFORMATION FOR SEQ ID NO: 9:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 396 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-356-060A-9

Query Match 96.2%; Score 2008; DB 2; Length 396;

Best Local Similarity 96.5%; Pred. No. 2.7e-214;
Matches 382; Conservative 6; Mismatches 8; Indels 0; Gaps 0;

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Qy       1 MALLTNLLPLCCLALLALPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGAS 60
           |||  :|||||||||||| |||||||||||||||| |||||||||||||| :||||||||
Db       1 MALPASLLPLCCLALLALSAQSCGPGRGPVGRRRYVRKQLVPLLYKQFVPSMPERTLGAS 60

Qy      61 GPAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPG 120
           ||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GPAEGRVTRGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPG 120

Qy     121 VRLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRN 180
           ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     121 VRLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRN 180

Qy     181 HVHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVL 240
           |:|||||||||||||||||||||||| ||||||||||||||||||:|||||||||
Db     181 HIHVSVKADNSLAVRAGGCFPGNATVRLRSGERKGLRELHRGDWVLAADAAGRVVPTPVL 240

Qy     241 LFLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAARGPAPAPGDFAPVFARRLRAGDSV 300
           |||||||||||||||||| ||||||||||||||||||||||||||||||||||||||||||
Db     241 LFLDRDLQRRASFVAVETERPPRKLLLTPWHLVFAARGPAPAPGDFAPVFARRLRAGDSV 300

Qy     301 LAPGGDALRPARVARVAREEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQWAHRAFAPL 360
           ||||||||:|||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 LAPGGDALQPARVARVAREEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQWAHRAFAPL 360

Qy     361 RLLHALGALLPGGAVQPTGMHWYSRLLYRLAEELLG 396
           |||||||||||||||||||||||||||||||||||:|
Db     361 RLLHALGALLPGGAVQPTGMHWYSRLLYRLAEELMG 396
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RESULT 3
US-08-460-900C-9
; Sequence 9, Application US/08460900C
; Patent No. 6165747
; GENERAL INFORMATION:
; APPLICANT: Ingham, Phillip W.
; APPLICANT: McMahon, Andrew P.
; APPLICANT: Tabin, Clifford J.
; APPLICANT: Bumcrot, David A.
; APPLICANT: Marti-Gorostiza, Elisa
; TITLE OF INVENTION: Vertebrate Embryonic Pattern-Inducing
; TITLE OF INVENTION: Proteins and Uses Related Thereto
; NUMBER OF SEQUENCES: 62
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: FOLEY, HOAG & ELIOT LLP
; STREET: One Post Office Square
; CITY: Boston
; STATE: MA
; COUNTRY: USA
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/460,900C
; FILING DATE: 5-JUNE-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/435,093
; FILING DATE: 4-MAY-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/356,060
; FILING DATE: 14-DEC-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/176,427
; FILING DATE: 30-DEC-1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Vincent, Matthew P.
; REGISTRATION NUMBER: 36,709
; REFERENCE/DOCKET NUMBER: HMV-006.05

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;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 832-1000
;      TELEFAX:  (617) 832-7000
;  INFORMATION FOR SEQ ID NO:  9:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  396 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-460-900C-9


  Query Match           96.2%;  Score 2008;  DB 4;  Length 396;
  Best Local Similarity   96.5%;  Pred. No. 2.7e-214;
  Matches  382;  Conservative    6;  Mismatches    8;  Indels    0;  Gaps    0;

Qy       1 MALLTNLLPLCCLALLALPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGAS 60
           |||  :|||||||||||| |||||||||||||| |||||||||||| :||||||||
Db       1 MALPASLLPLCCLALLALSAQSCGPGRGPVGRRRYVRKQLVPLLYKQFVPSMPERTLGAS 60

Qy      61 GPAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPG 120
           ||||||| ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      61 GPAEGRVTRGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPG 120

Qy     121 VRLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRN 180
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Db     121 VRLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRN 180

Qy     181 HVHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVL 240
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Db     181 HIHVSVKADNSLAVRAGGCFPGNATVRLRSGERKGLRELHRGDWVLAADAAGRVVPTPVL 240

Qy     241 LFLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAARGPAPAPGDFAPVFARRLRAGDSV 300
           |||||||||||||||||| ||||||||||||||||||||||||||||||||||||||||
Db     241 LFLDRDLQRRASFVAVETERPPRKLLLTPWHLVFAARGPAPAPGDFAPVFARRLRAGDSV 300

Qy     301 LAPGGDALRPARVARVAREEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQWAHRAFAPL 360
           |||||||:|||||||||||||||||||||||||||||||||||||||||||||||||||||
Db     301 LAPGGDALQPARVARVAREEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQWAHRAFAPL 360

Qy     361 RLLHALGALLPGGAVQPTGMHWYSRLLYRLAEELLG 396
           |||||||||||||||||||||||||||||||||:|
Db     361 RLLHALGALLPGGAVQPTGMHWYSRLLYRLAEELMG 396


RESULT   4
US-08-176-427B-8
; Sequence 8, Application US/08176427B
; Patent No. 5789543
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/176,427B
;      FILING DATE:  30-DEC-1993
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  8:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  437 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-176-427B-8


  Query Match           58.3%;  Score 1217;  DB 1;  Length 437;
  Best Local Similarity   58.7%;  Pred. No. 1.9e-126;
  Matches  249;  Conservative   53;  Mismatches   82;  Indels   40;  Gaps   12;

Qy       7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
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Db       4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy      62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
             ||:: | ||||::| |||||||||||||:|||||||:|||:::|||||:||| ||||
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Qy     122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
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Db     122 RLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy     182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
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Db     182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy     242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
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Db     242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy     298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
             |      ||| | || |  |  |||  | :|||||||:|:| ||||||||:| | |
Db     299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy     353 AHRAFAPLRLLHA-LGALLP-------GGAV-----------QPT-GMHWYSRLLYRLA 391
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Db     359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418

Qy     392 EELL 395
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Db     419 TWLL 422


RESULT   5
US-08-356-060A-11
; Sequence 11, Application US/08356060A
; Patent No. 5844079
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  47
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
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;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/356,060A
;      FILING DATE:  14-DEC-1994
;      CLASSIFICATION:  435
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006CP
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  437 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-356-060A-11

  Query Match             58.3%;  Score 1217;  DB 2;  Length 437;
  Best Local Similarity   58.7%;  Pred. No. 1.9e-126;
  Matches  249;  Conservative   53;  Mismatches   82;  Indels   40;  Gaps   12;

Qy       7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
Db       4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy      62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
Db      62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy     122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
Db     122 RLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy     182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
Db     182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy     242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
Db     242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy     298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
Db     299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy     353 AHRAFAPLRLLHA-LGALLP-------GGAV------------QPT-GMHWYSRLLYRLA 391
Db     359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418

Qy     392 EELL 395
Db     419 TWLL 422


RESULT   6
US-08-460-900C-11
; Sequence 11, Application US/08460900C
; Patent No. 6165747
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    APPLICANT:  Bumcrot, David A.
;    APPLICANT:  Marti-Gorostiza, Elisa
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  62
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  FOLEY, HOAG & ELIOT LLP
;      STREET:  One Post Office Square
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.30
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/460,900C
;      FILING DATE:  5-JUNE-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/435,093
;      FILING DATE:  4-MAY-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/356,060
;      FILING DATE:  14-DEC-1994
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  US 08/176,427
;      FILING DATE:  30-DEC-1993
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMV-006.05
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 832-1000
;      TELEFAX:  (617) 832-7000
;  INFORMATION FOR SEQ ID NO:  11:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  437 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-460-900C-11

  Query Match             58.3%;  Score 1217;  DB 4;  Length 437;
  Best Local Similarity   58.7%;  Pred. No. 1.9e-126;
  Matches  249;  Conservative   53;  Mismatches   82;  Indels   40;  Gaps   12;

Qy       7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
Db       4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy      62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
Db      62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy     122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
Db     122 RLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy     182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
Db     182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy     242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
Db     242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy     298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
Db     299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy     353 AHRAFAPLRLLHA-LGALLP-------GGAV------------QPT-GMHWYSRLLYRLA 391
Db     359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418
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Qy    392 EELL 395
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Db    419 TWLL 422


RESULT   7
US-08-946-329A-20
; Sequence 20, Application US/08946329A
; Patent No. 6057091
;  GENERAL INFORMATION:
;    APPLICANT:  Beachy, Philip A.
;    APPLICANT:  Porter, Jeffrey A.
;    TITLE OF INVENTION:  NOVEL HEDGEHOG-DERIVED POLYPEPTIDES
;    NUMBER OF SEQUENCES:  109
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson P.C.
;      STREET:  4225 Executive Square, Suite 1400
;      CITY:  La Jolla
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  Windows 95
;      SOFTWARE:  FastSEQ for Windows Version 2.0b
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/946,329A
;      FILING DATE:  07-OCT-1997
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  60/061,323
;      FILING DATE:  07-OCT-1996
;      APPLICATION NUMBER:  08/729,743
;      FILING DATE:  10-JUL-1996
;      APPLICATION NUMBER:  08/567,357
;      FILING DATE:  04-DEC-1995
;      APPLICATION NUMBER:  08/349,498
;      FILING DATE:  02-DEC-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Haile, Lisa A.
;      REGISTRATION NUMBER:  38,347
;      REFERENCE/DOCKET NUMBER:  07265/140001
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619/678-5070
;      TELEFAX:  619/678-5099
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  437 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-946-329A-20


  Query Match             58.1%;  Score 1214;  DB 3;  Length 437;
  Best Local Similarity   58.5%;  Pred. No. 4.1e-126;
  Matches  248;  Conservative   54;  Mismatches   82;  Indels   40;  Gaps   12;

Qy      7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
          ||  | | :||      |  :||||||  |:||: :| | || ||||:| | |:||||||
Db      4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy     62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
            ||:: | ||||::| |||||||||||||:|||||||:|||:::||||||:||| ||||
Db     62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy    122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
          :|||||||||||::|||||||:||||||||:|||:||||||||||||||||: |
Db    122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy    182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
          :| ||||:||:| ::||||||:||| |  |  | :::|  || |||||  ||:: :  |

Db    182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy    242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
          |||||   :  |  :||  |  :|||| ||:| |     || | |   : :|| |:| |
Db    242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy    298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
            |      |||  | || |  |  |||  | :||||||||:|:| ||||||||:| | |
Db    299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy    353 AHRAFAPLRLLHA-LGALLP-------GGAV------------QPT-GMHWYSRLLYRLA 391
          ||||||| || || | || |       ||::            :|| |:||||:||| :
Db    359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418

Qy    392 EELL 395
            ||
Db    419 TWLL 422


RESULT   8
US-08-567-357A-20
; Sequence 20, Application US/08567357A
; Patent No. 6132728
;  GENERAL INFORMATION:
;    APPLICANT:  Beachy, Philip A.
;    APPLICANT:  Moon, Randall T.
;    APPLICANT:  Porter, Jeffrey A.
;    TITLE OF INVENTION:  NOVEL HEDGEHOG-DERIVED POLYPEPTIDES
;    NUMBER OF SEQUENCES:  37
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Fish & Richardson P.C.
;      STREET:  4225 Executive Square, Suite 1400
;      CITY:  La Jolla
;      STATE:  CA
;      COUNTRY:  USA
;      ZIP:  92037
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Diskette
;      COMPUTER:  IBM Compatible
;      OPERATING SYSTEM:  Windows 95
;      SOFTWARE:  FastSEQ for Windows Version 2.0b
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/567,357A
;      FILING DATE:  04-DEC-1995
;    PRIOR APPLICATION DATA:
;      APPLICATION NUMBER:  08/349,498
;      FILING DATE:  02-DEC-1994
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Haile, Lisa A.
;      REGISTRATION NUMBER:  38,347
;      REFERENCE/DOCKET NUMBER:  07265/080001
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  619/678-5070
;      TELEFAX:  619/678-5099
;  INFORMATION FOR SEQ ID NO:  20:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  437 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-567-357A-20


  Query Match             58.1%;  Score 1214;  DB 4;  Length 437;
  Best Local Similarity   58.5%;  Pred. No. 4.1e-126;
  Matches  248;  Conservative   54;  Mismatches   82;  Indels   40;  Gaps   12;

Qy      7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
          ||  | | :||      |  :||||||  |:||: :| | || ||||:| | |:||||||
Db      4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy     62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
            ||:: | ||||::| |||||||||||||:|||||||:|||:::||||||:||| ||||
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Db     62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy    122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181

Db    122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy    182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241

Db    182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy    242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297

Db    242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy    298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352

Db    299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy    353 AHRAFAPLRLLHA-LGALLP-------GGAV-----------QPT-GMHWYSRLLYRLA 391

Db    359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418

Qy    392 EELL 395

Db    419 TWLL 422
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RESULT 9
US-08-729-743A-20
; Sequence 20, Application US/08729743A
; Patent No. 6214794
; GENERAL INFORMATION:
; APPLICANT: Beachy, Philip A.
; APPLICANT: Moon, Randall T.
; APPLICANT: Porter, Jeffrey A.
; TITLE OF INVENTION: NOVEL HEDGEHOG-DERIVED POLYPEPTIDES
; NUMBER OF SEQUENCES: 37
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: USA
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette
; COMPUTER: IBM Compatible
; OPERATING SYSTEM: Windows 95
; SOFTWARE: FastSEQ for Windows Version 2.0b
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/729,743A
; FILING DATE: 07-OCT-1996
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/567,357
; FILING DATE: 04-DEC-1995
; APPLICATION NUMBER: 08/349,498
; FILING DATE: 02-DEC-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Haile, Lisa A.
; REGISTRATION NUMBER: 38,347
; REFERENCE/DOCKET NUMBER: 07265/099001
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619/678-5070
; TELEFAX: 619/678-5099
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 437 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-729-743A-20

Query Match 58.1%; Score 1214; DB 4; Length 437;
Best Local Similarity 58.5%; Pred. No. 4.1e-126;
Matches 248; Conservative 54; Mismatches 82; Indels 40; Gaps 12;

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Qy      7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61

Db      4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy     62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121

Db     62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy    122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181

Db    122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy    182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241

Db    182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy    242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297

Db    242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy    298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352

Db    299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy    353 AHRAFAPLRLLHA-LGALLP-------GGAV-----------QPT-GMHWYSRLLYRLA 391

Db    359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418

Qy    392 EELL 395

Db    419 TWLL 422
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RESULT 10
PCT-US95-15463-20
; Sequence 20, Application PC/TUS9515463
; GENERAL INFORMATION:
; APPLICANT: The Johns Hopkins University School of Medicine
; TITLE OF INVENTION: NOVEL HEDGEHOG-DERIVED POLYPEPTIDES
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: U.S.A.
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US95/15463
; FILING DATE: 01-DEC-1995
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Haile, Lisa A.
; REGISTRATION NUMBER: 38,347
; REFERENCE/DOCKET NUMBER: 07265/080WO1
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619/678-5070
; TELEFAX: 619/678-5099
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 437 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein

PCT-US95-15463-20

Query Match 58.1%; Score 1214; DB 5; Length 437;
Best Local Similarity 58.5%; Pred. No. 4.1e-126;
Matches 248; Conservative 54; Mismatches 82; Indels 40; Gaps 12;

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Qy       7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
           ||  | | :||      |  :||||||  |:||: :| | || ||||:| | |:||||||
Db       4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy      62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
             ||:: | ||||::| |||||||||||||:|||||||:|||:::||||||:||| ||||
Db      62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy     122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
           :|||||||||||||:::|||||||:||||||||:|||:|||||||||||||||||||: |
Db     122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy     182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
           :| ||||:||:| ::||||||:||| |  |  | :::|  || |||||  ||:: :  |
Db     182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy     242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
           |||||   :  |  :||  |  :|||| ||:| |     || | |   : :|| |:| |
Db     242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy     298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
             |      |||  | || |  |  ||| | :||||||||:|:| |||||||||:| | |
Db     299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy     353 AHRAFAPLRLLHA-LGALLP-------GGAV------------QPT-GMHWYSRLLYRLA 391
           |||||| || || | || |        ||::            :|| |:||||:||| :
Db     359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418

Qy     392 EELL 395
             ||
Db     419 TWLL 422
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RESULT 11
PCT-US95-15923-20
; Sequence 20, Application PC/TUS9515923
; GENERAL INFORMATION:
; APPLICANT: The Johns Hopkins University School of Medicine, et al.
; TITLE OF INVENTION: NOVEL HEDGEHOG-DERIVED POLYPEPTIDES
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson P.C.
; STREET: 4225 Executive Square, Suite 1400
; CITY: La Jolla
; STATE: CA
; COUNTRY: U.S.A.
; ZIP: 92037
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US95/15923
; FILING DATE: 04-DEC-1995
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Haile, Lisa A.
; REGISTRATION NUMBER: 38,347
; REFERENCE/DOCKET NUMBER: 07265/043WO1
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 619/678-5070
; TELEFAX: 619/678-5099
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 437 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
PCT-US95-15923-20

Query Match 58.1%; Score 1214; DB 5; Length 437;
Best Local Similarity 58.5%; Pred. No. 4.1e-126;
Matches 248; Conservative 54; Mismatches 82; Indels 40; Gaps 12;

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Qy       7 LLPLCCLALLA-----LPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
           ||  | | :||      |  :||||||  |:||: :| | || ||||:| | |:||||||
Db       4 LLARCFLVILASSLLVCPGLACGPGRG-FGKRRHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy      62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
             ||:: | ||||::| |||||||||||||:|||||||:|||:::||||||:||| ||||
Db      62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy     122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
           :|||||||||||||:::|||||||:||||||||:|||:|||||||||||||||||||: |
Db     122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAH 181

Qy     182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
           :| ||||:||:| ::||||||:||| |  |  | :::|  || |||||  ||:: :  |
Db     182 IHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLRPGDRVLAADDQGRLLYSDFLT 241

Qy     242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
           |||||   :  |  :||  |  :|||| ||:| |     || | |   : :|| |:| |
Db     242 FLDRDEGAKKVFYVIETLEPRERLLLTAAHLLFVAPHNDSGPTPGP---SALFASRVRPG 298

Qy     298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
             |      |||  | || |  |  ||| | :||||||||:|:| |||||||||:| | |
Db     299 QRVYVVAERGGDRRLLPAAVHSVTLREEEAGAYAPLTAHGTILINRVLASCYAVIEEHSW 358

Qy     353 AHRAFAPLRLLHA-LGALLP-------GGAV------------QPT-GMHWYSRLLYRLA 391
           |||||| || || | || |        ||::            :|| |:||||:||| :
Db     359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAAQSATEARGAEPTAGIHWYSQLLYHIG 418

Qy     392 EELL 395
             ||
Db     419 TWLL 422
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RESULT 12
US-08-757-230A-2
; Sequence 2, Application US/08757230A
; Patent No. 6235885
; GENERAL INFORMATION:
; APPLICANT: Thomas M. Jessell, et al.
; TITLE OF INVENTION: RAT HEDGEHOG PROTEIN-1 (VHH-1)
; FILE REFERENCE: 0575/45375-1/JPW/SHS/MVM
; CURRENT APPLICATION NUMBER: US/08/757,230A
; CURRENT FILING DATE: 1996-11-27
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 2
; LENGTH: 437
; TYPE: PRT
; ORGANISM: RAT
US-08-757-230A-2

Query Match 57.6%; Score 1203; DB 4; Length 437;
Best Local Similarity 57.8%; Pred. No. 6.8e-125;
Matches 245; Conservative 52; Mismatches 87; Indels 40; Gaps 10;

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Qy       7 LLPLCCL-----ALLALPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
           ||  | |      :||  |  :||||||  |:|:: :| | || ||||:| | |:||||||
Db       4 LLARCFLVALASSLLVCPGLACGPGRG-FGKRQHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy      62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
             ||:: | ||||::| |||||||||||||:|||||||:|||:::||||||:||| ||||
Db      62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121
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Qy    122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
          :|||||||||||||:::|||||||:|||||||:|||:||||||||||||||||:
Db    122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAR 181

Qy    182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
          :| ||||:||:| :: |||||:||| |  |  |.:::|  || |||||  ||:: :  |
Db    182 IHCSVKAENSVAAKSDGCFPGSATVHLEQGGTKLVKDLSPGDRVLAADDQGRLLYSDFLT 241

Qy    242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
          |||||   :  |  :||  |  :|||| ||:| |     || | |   :|:|| |:| |
Db    242 FLDRDEGAKKVFYVIETREPRERLLLTAAHLLFVAPHNDSGPTPGP---SPLFASRVRPG 298

Qy    298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
            |      |||  | || |  |  |||| | :||||| ||:|:| |||||||:| | |
Db    299 QRVYVVAERGGDRRLLPAAVHSVTLREEAAGAYAPLTADGTILINRVLASCYAVIEEHSW 358

Qy    353 AHRAFAPLRLLHA-LGALLPG-------------------GAVQPTGMHWYSRLLYRLA 391
          ||||||| || || | || |                     ||  | |:||||:||| :
Db    359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAPQSVAEARGAGPPAGIHWYSQLLYHIG 418

Qy    392 EELL 395
            ||
Db    419 TWLL 422
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RESULT  13
US-08-757-230A-9
; Sequence 9, Application US/08757230A
; Patent No. 6235885
; GENERAL INFORMATION:
;  APPLICANT: Thomas M. Jessell, et al.
;  TITLE OF INVENTION: RAT HEDGEHOG PROTEIN-1 (VHH-1)
;  FILE REFERENCE: 0575/45375-1/JPW/SHS/MVM
;  CURRENT APPLICATION NUMBER: US/08/757,230A
;  CURRENT FILING DATE:  1996-11-27
;  NUMBER OF SEQ ID NOS: 9
;  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 9
;   LENGTH: 437
;   TYPE: PRT
;   ORGANISM: Rat
US-08-757-230A-9
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  Query Match           57.6%;  Score 1203;  DB 4;  Length 437;
  Best Local Similarity   57.8%;  Pred. No. 6.8e-125;
  Matches  245;  Conservative   52;  Mismatches   87;  Indels   40;  Gaps   10;

Qy      7 LLPLCCL-----ALLALPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
            ||  | |     :||  |  :||||||  |:|:: :| | || ||||:| | |:||||||
Db      4 LLARCFLVALASSLLVCPGLACGPGRG-FGKRQHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy     62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
            ||:: | ||||::| |||||||||||||:|||||||:|||:::|||||:||| ||||
Db     62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy    122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
          :|||||||||||||:::|||||||:|||||||:|||:||||||||||||||||:
Db    122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAR 181

Qy    182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
          :| ||||:||:| :: |||||:||| |  |  | :::|  || |||||  ||:: :  |
Db    182 IHCSVKAENSVAAKSDGCFPGSATVHLEQGGTKLVKDLSPGDRVLAADDQGRLLYSDFLT 241

Qy    242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
          |||||   :  |  :||  |  :|||| ||:| |     || | |   :|:|| |:| |
Db    242 FLDRDEGAKKVFYVIETREPRERLLLTAAHLLFVAPHNDSGPTPGP---SPLFASRVRPG 298

Qy    298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
            |      |||  | || |  |  |||| | :||||| ||:|:| |||||||:| | |
Db    299 QRVYVVAERGGDRRLLPAAVHSVTLREEAAGAYAPLTADGTILINRVLASCYAVIEEHSW 358
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```
Qy    353 AHRAFAPLRLLHA-LGALLPG-------------------GAVQPTGMHWYSRLLYRLA 391
          ||||||| || || | || |                     ||  | |:||||:||| :
Db    359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAPQSVAEARGAGPPAGIHWYSQLLYHIG 418

Qy    392 EELL 395
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Db    419 TWLL 422
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RESULT  14
PCT-US95-02315-2
; Sequence 2, Application PC/TUS9502315
;  GENERAL INFORMATION:
;    APPLICANT:  Jessell, Thomas M.
;    APPLICANT:  Dodd, Jane
;    APPLICANT:  Roelink, Henk
;    APPLICANT:  Edlund, Thomas
;    TITLE OF INVENTION:  DNA ENCODING A VERTEBRATE HOMOLOG OF
;    TITLE OF INVENTION:  HEDGEHOG, VHH-1, EXPRESSED BY THE NOTOCHORD, AND USES
;    TITLE OF INVENTION:  THEREOF
;    NUMBER OF SEQUENCES:  6
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  Cooper & Dunham
;      STREET:  1185 Avenue of the Americas
;      CITY:  New York
;      STATE:  New York
;      COUNTRY:  USA
;      ZIP:  10036
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  PatentIn Release #1.0, Version #1.25
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  PCT/US95/02315
;      FILING DATE:
;      CLASSIFICATION:
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  John P. White
;      REGISTRATION NUMBER:  28,678
;      REFERENCE/DOCKET NUMBER:  45375-A-PCT
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (212) 278-0400
;      TELEFAX:  (212) 391-0525
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  437 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
PCT-US95-02315-2
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  Query Match           57.6%;  Score 1203;  DB 5;  Length 437;
  Best Local Similarity   57.8%;  Pred. No. 6.8e-125;
  Matches  245;  Conservative   52;  Mismatches   87;  Indels   40;  Gaps   10;

Qy      7 LLPLCCL-----ALLALPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTLGASG 61
            ||  | |     :||  |  :||||||  |:|:: :| | || ||||:| | |:||||||
Db      4 LLARCFLVALASSLLVCPGLACGPGRG-FGKRQHPKK-LTPLAYKQFIPNVAEKTLGASG 61

Qy     62 PAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNMWPGV 121
            ||:: | ||||::| |||||||||||||:|||||||:|||:::|||||:||| ||||
Db     62 RYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGV 121

Qy    122 RLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYESRNH 181
          :|||||||||||||:::|||||||:|||||||:|||:||||||||||||||||:
Db    122 KLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAR 181

Qy    182 VHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPTPVLL 241
          :| ||||:||:| :: |||||:||| |  |  | :::|  || |||||  ||:: :  |
Db    182 IHCSVKAENSVAAKSDGCFPGSATVHLEQGGTKLVKDLSPGDRVLAADDQGRLLYSDFLT 241
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```
Qy    242 FLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA----RGPAPAPGDFAPVFARRLRAG 297
          |||||   :  |  :||  |  :||||  ||:| |     || | |   :|:|| |:| |
Db    242 FLDRDEGAKKVFYVIETREPRERLLLTAAHLLFVAPHNDSGPTPGP---SPLFASRVRPG 298

Qy    298 DSVLA---PGGD-ALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESHQW 352
            |      |||  | || |  |  |||| | :||||| ||:|:| ||||||||:| | |
Db    299 QRVYVVAERGGDRRLLPAAVHSVTLREEAAGAYAPLTADGTILINRVLASCYAVIEEHSW 358

Qy    353 AHRAFAPLRLLHA-LGALLPG-------------------GAVQPTGMHWYSRLLYRLA 391
          ||||||| || || | || |                     ||  | |:||||:||| :
Db    359 AHRAFAPFRLAHALLAALAPARTDGGGGGSIPAPQSVAEARGAGPPAGIHWYSQLLYHIG 418

Qy    392 EELL 395
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Db    419 TWLL 422
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RESULT  15
US-08-176-427B-2
; Sequence 2, Application US/08176427B
; Patent No. 5789543
;  GENERAL INFORMATION:
;    APPLICANT:  Ingham, Phillip W.
;    APPLICANT:  McMahon, Andrew P.
;    APPLICANT:  Tabin, Clifford J.
;    TITLE OF INVENTION:  Vertebrate Embryonic Pattern-Inducing
;    TITLE OF INVENTION:  Proteins and Uses Related Thereto
;    NUMBER OF SEQUENCES:  33
;    CORRESPONDENCE ADDRESS:
;      ADDRESSEE:  LAHIVE & COCKFIELD
;      STREET:  60 State Street
;      CITY:  Boston
;      STATE:  MA
;      COUNTRY:  USA
;      ZIP:  02109
;    COMPUTER READABLE FORM:
;      MEDIUM TYPE:  Floppy disk
;      COMPUTER:  IBM PC compatible
;      OPERATING SYSTEM:  PC-DOS/MS-DOS
;      SOFTWARE:  ASCII(text)
;    CURRENT APPLICATION DATA:
;      APPLICATION NUMBER:  US/08/176,427B
;      FILING DATE:  30-DEC-1993
;      CLASSIFICATION:  435
;    ATTORNEY/AGENT INFORMATION:
;      NAME:  Vincent, Matthew P.
;      REGISTRATION NUMBER:  36,709
;      REFERENCE/DOCKET NUMBER:  HMI-006
;    TELECOMMUNICATION INFORMATION:
;      TELEPHONE:  (617) 227-7400
;      TELEFAX:  (617) 227-5941
;  INFORMATION FOR SEQ ID NO:  2:
;    SEQUENCE CHARACTERISTICS:
;      LENGTH:  425 amino acids
;      TYPE:  amino acid
;      TOPOLOGY:  linear
;    MOLECULE TYPE:  protein
US-08-176-427B-2
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  Query Match             57.4%;  Score 1198;  DB 1;  Length 425;
  Best Local Similarity   59.4%;  Pred. No. 2.3e-124;
  Matches  244;  Conservative   56;  Mismatches   91;  Indels   20;  Gaps   10;

Qy      1 MALLTNLLP---LCCLALLALPAQSCGPGRGPVGRRRYARKQLVPLLYKQFVPGVPERTL 57
            | ||| :|    :|  |||     :|||||| :|:||: :| | || ||||:| | |:||
Db      4 MLLLTRILLVGFIC--ALLVSSGLTCGPGRG-IGKRRHPKK-LTPLAYKQFIPNVAEKTL 59

Qy     58 GASGPAEGRVARGSERFRDLVPNYNPDIIFKDEENSGADRLMTERCKERVNALAIAVMNM 117
          ||||  ||:: | ||||::| |||||||||||||||:|||||||:|||:::|||||:|||
Db     60 GASGRYEGKITRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQ 119

Qy    118 WPGVRLRVTEGWDEDGHHAQDSLHYEGRALDITTSDRDRNKYGLLARLAVEAGFDWVYYE 177
```

```
          ||||:|||||||||||||:::|||||||:|||||||||:|||:|||||||||||||||||
Db    120 WPGVKLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYE 179

Qy    178 SRNHVHVSVKADNSLAVRAGGCFPGNATVRLWSGERKGLRELHRGDWVLAADASGRVVPT 237
          |: |:| ||||:||:| ::|||||:||| |  |  | :::|  || |||||| ||:: :
Db    180 SKAHIHCSVKAENSVAAKSGGCFPGSATVHLEHGGTKLVKDLSPGDRVLAADADGRLLYS 239

Qy    238 PVLLFLDRDLQRRASFVAVETEWPPRKLLLTPWHLVFAA--RGPAPAPGDFA--PVFARR 293
            | ||||    |  |  :||  |  :|||| ||:| |     : | |  :   :||
Db    240 DFLTFLDRMDSSRKLFYVIETRQPRARLLLTAAHLLFVAPQHNQSEATGSTSGQALFASN 299

Qy    294 LRAGDS--VLAPGGDALRPARVARVA-REEAVGVFAPLTAHGTLLVNDVLASCYAVLESH 350
          :: |    ||  ||  | || |  |: |||| | :||||| ||:|:| ||||||||:| |
Db    300 VKPGQRVYVLGEGGQQLLPASVHSVSLREEASGAYAPLTAQGTILINRVLASCYAVIEEH 359

Qy    351 QWAHRAFAPLRLLHA-LGALLPGGAV-----QPTGMHWYSRLLYRLAEELL 395
           ||| |||| ||    | || | ||:       ||:|||||||||:   :|
Db    360 SWAHWAFAPFRLAQGLLAALCPDGAIPTAATTTTGIHWYSRLLYRIGSWVL 410
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Search completed: September  7, 2001, 14:41:00
Job time: 2406 sec
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